scm group

Translation of the original operating instructions

This manual must be kept for future reference and must always remain with the machine

FORMULA S40

INSTRUCTION MANUAL

CE

DIMENSION SAW

SQUARING CIRCULAR SAW FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS

Rel. 0.0 / 05-2013 00L0167026G EN

MANUFACTURER:	**SCM GROUP spa**
ADDRESS:	**Via Emilia 77 - I - 47921 - RIMINI (ITALY)**
DESIGNATION:	**SEGA-SQUADRATRICE / SEGA CIRCOLARE** **SQUADRATRICE PER LA LAVORAZIONE DEL LEGNO E DI** **MATERIE CON CARATTERISTICHE FISICHE SIMILI**
BRAND:	**SCM**
TYPE:	**SE 13**
MODEL:	**FORMULA S40**
SERIAL N°::	
TYPE OF DOCUMENT:	**INSTRUCTION MANUAL**
DOCUMENT CODE:	**00L0167026G**
EDITION:	**Rel. 0.0 / 05-2013**
CONFORMITY:	CE

DICHIARAZIONE "CE" DI CONFORMITA'

(AI SENSI DELL' ALL.IIA DELLA DIRETTIVA 2006/42/CE E DI ALTRE DIRETTIVE APPLICABILI)

"EC" STATEMENT OF COMPLIANCE

(IN ACCORDANCE WITH ANNEX II A TO DIRECTIVE 2006/42/EC AND OTHER DIRECTIVES APPLICABLE)

IL FABBRICANTE: THE MANUFACTURER:	***SCM GROUP S.P.A.*** ***VIA EMILIA, 77 I-47921, RIMINI (RN) - ITALY***

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declares that the

MACCHINA:	**SEGA CIRCOLARE SQUADRATRICE PER LA LAVORAZIONE DEL LEGNO E DI MATERIE CON CARATTERISTICHE FISICHE SIMILI**		
MACHINE	**SQUARING CIRCULAR SAW FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS**		
MARCA: BRAND:	**TECNOMAX**	N° DI SERIE: SERIES N°:	
TIPO: MODEL:	**SE 13**	ANNO DI COSTRUZIONE: DATE OF MANUFACTURE:	
MODELLO: MODEL:	**FORMULA-S40**		

E' CONFORME A TUTTE LE DISPOSIZIONI PERTINENTI DELLE SEGUENTI DIRETTIVE:

COMPLIES WITH ALL THE RELEVANT REGULATIONS IN THE FOLLOWING DIRECTIVES:

2006/42/CE	**2006/42/EC**
2004/108/CE	**2004/108/EC**

ORGANISMO NOTIFICATO CHE HA EFFETTUATO L'ESAME CE DI TIPO NOTIFIED BODY WHICH DELIBERATED ON THE "EC" TYPE EXAMINATION CERTIFICATE	DGUV TEST PRUEF-UND ZERTIFIZIERUNGSSTELL HOLZ FACHBEREICH HOLZ UND METALL VOLLMOELLER STR,11 70563 STUTTGART GERMA
NUMERO DI ATTESTATO D'ESAME CE DI TIPO NUMBER OF "EC" TYPE EXAMINATION CERTIFICATE	131042
PERSONA AUTORIZZATA A COSTITUIRE IL FASCICOLO TECNICO: PERSON AUTHORISED TO PRODUCE THE TECHNICAL FILE:	SCM Group s.p.a. Via Emilia, 77 I-47921, Rimini(RN) - ITALY

FACSIMILE OF THE COPY OF THE "EC" DECLARATION PRINTED ON WATERMARKED PAPER THAT IS DELIVERED TO THE CUSTOMER

Rimini, 25/10/2013

IL RAPPRESENTANTE DELEGATO DEL FABBRICANTE

MANUFACTURER'S DELEGATED REPRESENTATIVE

[ITA] LINGUA ORIGINALE DICHIARAZIONE

[ING] TRANSLATION OF DECLARATION ORIGINAL LANGUAGE

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(=_st-1)

"ELECTROMAGNETIC COMPATIBILITY"
The machine complies with the requirements of standard CEI EN 50370-1:2006.

"The following attachments are an integral part of this instruction manual:

- Electrical diagrams (read the number of the electrical diagram on the identification plate placed on the machine in the "W.D." line).

The electrical diagrams are for the exclusive use of competent technicians working for the manufacturer or the mandatary, therefore they are only in Italian, English, German, Spanish and French."

1.1 AIM OF THE HANDBOOK

(=_ev-1-1_0.0)

This handbook has been written by the machine manufacturer[1] and is an integrating part of the machine[2]. The information serves for qualified technicians[3].

With this handbook we wish to give you all information regarding to the use and maintenance of the machine: in this way you are sure to protect the production as well as the equipments.

The handbook defines the proper use of the machine and gives all information necessary for:
- right use of the machine
- working economy
- long operation life

If the instructions are always kept, it is possible to guaranty safety conditions for the operator, safe machine operation, service economy and a longer life of the machine.

To make the easier, the handbbok is divided in proper sections.
To quickly find the subject, see the Contents.

NOTE-INFORMATION:
some images present in this handbook may:
- ***not exactly correspond to the real machine version when this does not influence the validity of the information and instructions described and does not prejudice the safe operation.***
- ***Be indicated without safety guards in order to make the parts described in the text more visible.***

DANGER-WARNING:
the safety guards are necessary to ensure the safe machine operation and the working without the safety guards is forbidden.

SCM sales organization is always at your disposal for any technical problem (reparation, spare part delivery etc.) and to improve your business.
Keep this handbook for future information besides it shall always be with the machine.
SCM is not responsible for damages caused by wrong use or maintenance of the machine.

1 - GENERAL INFORMATION

For any technical problem apply to SCM dealer:

1 The defintions manufacturer and SCM replace the complete denomination SCM GROUP S.p.A.

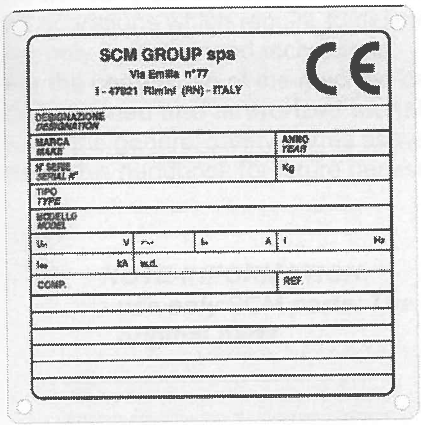
2 The definition "machine" replaces "FORMULA S 40" machine name.

3 Technicians who, thanks to their technical background and experience, are able to recognize and to avoid possible dangers during:
- the machine transport
- the installation
- the machine use and maintenance.

1.2 MACHINE IDENTIFICATION

(=_gg-1-2_0.0)

Machine data are punched on the metallic plate applied to the side of the machine frame.


SCM GROUP spa
Via Emilia n°77
I - 47921 Rimini (RN) - ITALY
CE
DESIGNAZIONE
DESIGNATION
MARCA
MAKE
ANNO
YEAR
N° SERIE
SERIAL N°
Kg
TIPO
TYPE
MODELLO
MODEL
Un
V
~
In
A
f
Hz
Icc
kA
w.d.
COMP.
REF.

Designation		Abbreviated, conventional description of the machine designation and its function
Marca		Merchandise mark
Anno		Production year
N° Serie	Serial number	
kg	Weight (kg)	
Tipo		Machine type
Modello	Machine model	
Un	V	Rated voltage (volt)
~		Phases number (alternate current)
In	A	Rated current (ampere)
F	Hz	Frequency (hertz)
Icc.	kA	Short circuit breaking capacity of the protective device (kA)
w.d.		Wiring diagram number
Comp.		Machine configurations
Ref.		Internal references

1.3 MAIL CONTACT

(=_gg-1-3_0.0)

Writing or telephoning to the dealer or to SCM for problems concerning your machine, always specify the following information:

1) machine model
2) serial number
3) voltage and frequency
4) purchase date
5) name of the dealer where the machine was bought
6) detailed information about the trouble
7) detailed information about the working to be carried out
8) period of use - number of working hours

SCM GROUP spa
via Emilia n° 77
I - 47921, Rimini (RN) - ITALY

Assistance Department:
Tel. ++39 - 0541/700100
Fax. ++39 - 0541/674777
E-mail: serviceformula @scmgroup.com

Spare Parts Department:
Fax. ++39 - 0541/674720
web-site:www.scmgroup.com

1.4 NOTES FOR THE USER

(=_gg-1-4_0.0)

The handbook describes all operations required for the normal maintenance of the machine.
Do not carry out any operation not described in this handbook.
All operations which require to desmount machine members as well as maintenance operations shall be carried out only by authorized technicians.
For the correct use of the machine carry out the proper instructions given in this handbook.
Only trained and authorized technicians may use the machine and carry out maintenance operations.
Keep the general safety norms as well as the rules of industrial medicine.
Keep this handbook for future necessity.

NOTE-INFORMATION:
- use only SCM ***parts. The manufacturer is not responsible for damages due to the use of not original parts.***

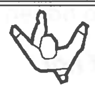
1.4.1 ABBREVIATIONS USED IN THIS HANDBOOK

(=_gg-1-41_0.0_ce)

pag. = page
fig. = figure
par. = paragraph
chap. = chapter
i.e. = example
ref. = reference
DPI = Individual protective equipment

1.5 SYMBOLS USED IN THIS HANDBOOK

(= gg-1-5_0.0_ce)

special	***Special devices, not indicated in list price, available only upon request and only after technical examination.***
OPT	***OPTIONAL = devices indicated in list price available only upon request.***
	***Operator position.***
⚠	***DANGER-WARNING: imminent dangers could cause serious injuries; careful attention is needed.***
ℹ	***NOTE-INFORMATION: technical, very important information.***
📖	***READ-MANUAL: indicates that before using the machine, you must read the instructions manual and understand all its parts***
🚫	***FORBIDDEN: indicates manouvres, commands or others that cannot be carried out as they can create very dangerous situations for persons and damage the machine.***
⚠	***CAUTION: suitable measures should be taken to prevent accidents or to prevent things from being damaged.***

	MACHINE OFF STATUS efore carrying out any type of maintenance and/or making any adjustment to the machine, all of the power supplies (electric and pneumatic) must be switched OFF. Make sure that the machine is stopped power supplies electric and pneumatic (if is present) must be switched OFF. Make sure that the machine is stopped and that it is impossible for it to start up unexpectedly (main switch in the "0" position and locked; compressed air cut-off valve closed and compressed air cut-off valve closed and locked).

Personnel who will be working on the machine must, apart from being professionally trained for the job, read the manuals paying particular attention to the safety regulations and the paragraphs relative to his area of competence. The machine operators are identified as follows:

	ASSIGNED OPERATOR A professionally trained operator who is at least 18 years old, in compliance with the laws in force in the country where the machine is being used, qualified to exclusively turn on, use, tool-up, set (only with the safety devices enabled and the machine turned off) and to switch off the machine, in full compliance with the instructions given in this with the instructions given in this manual.

	MAINTENANCE ELECTRICIAN A qualified technician (electrician with the technical/professional qualifications required by current regulations), authorized to exclusively carry out operations on the electric devices in making adjustments, performing maintenance and/or repairs, even with the power supply ON and the safety devices disabled (subject to the consent of the health and safety officer), in full compliance with the instructions given in this manual or in other specific documents furnished exclusively by the Manufacturer.

	OPERATOR IN CHARGE OF MOVING THE MACHINE A professionally trained operator who is at least 18 years old, in compliance with the laws in force in the country where the machine is being used, qualified to drive fork lift trucks, bridge cranes or cranes used to safely move the machine and/or parts of the used to safely move the machine and/or parts of the machine.

	MAINTENANCE MECHANIC A skilled technician qualified to exclusively carry out operations on the mechanical, hydraulic and pneumatic parts of the machine, to make adjustments, perform maintenance and/or repairs, even with the safety device disabled (subject to the consent of the health and safety officer), in full compliance with the instructions given in this manual or in other specific documents furnished exclusively by the Manufacturer.

COMPANY HEALTH AND SAFETY OFFICER

A qualified technician, designated by the Client with the technical/professional qualifications required by current regulations relative to worker health and safety in the by current regulations relative to worker health and safety in the workplace.

MANUFACTURER'S TECHNICIAN

A qualified technician sent by the Manufacturer and/or Dealer who is authorized to provide required technical assistance, to perform routine and extraordinary maintenance operations and/or operations not referred to in this manual which require specific and detailed knowledge of the machine.

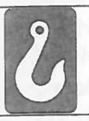
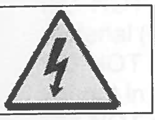
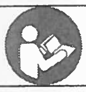
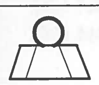
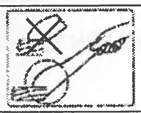
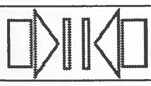
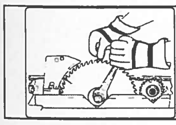
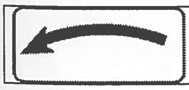
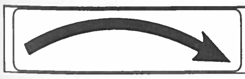
1.6 SYMBOLS ON THE MACHINE

(=_gg-1-g_0.0_ce)

CAUTION:
the operator must pay attention to the signs and plates fixed on the machine.

The signs and plates must be inspected and cleaned regularly to keep them clear and legible.

If the signs and plates are not clearly legible, contact the manufacturer for their replacement.
In case of replacement, operate as follows:
- Remove the old sign or plate.
- Clean the area with detergent.
- Fit the new sign or plate, respecting the position and orientation of the old one.

	Indicates the point where the hooks shall be applied for machine raising
	***Danger due to electric power***
	**READ-MANUAL: indicates that before using the machine, you must read the instructions manual and understand all its parts**
	***Indicates the weight of the machine parts which may be removed***
	Indicates how to use the workpiece pusher
	Locking symbol
	Use gloves for handling the tools
	Indicates the tool rotation direction
	Indicates the tool rotation direction

1.8 CONDITIONS FORESEEN FOR THE USE

(=_ev-1-8_0.0)

CAUTION:
for any requirement or advice on cutting plastic materials, contact the tool manufacturer or the local SCM ***dealer.***

1.9 TOOLS WHICH MAY BE USED

(=_ev-1-9_0.0)

The machine has been designed to use only tools for manual feed, in accordance with EN 847-1 Norm, proper for the material used.

By manual feed we mean the piece guidance by means of:
- the hand,
- the sliding table pushed by hand,
- the feeder.

1.10 WORKING ENVIRONMENT

(=_gg-1-9_0.0)

The machine can work under these conditions:
Max. humidity 90%
Temperature: Min. +1° C Max. +40° C
Max. altitudine sea level: 1000 m (in case of higher altitude apply to the machine manufacturer)

Always connect the machine to the suction system (see par. 4-5).

The machine may not be used in the open air.
The machine was designed for industrial use.

The machine may not operate in explosive rooms.

1.11 INCORRECT USE THAT CAN BE REASONABLY EXPECTED

(=_1.1_(01-2010))

- DO NOT use the machine if you are not an authorised and trained operator.
- DO NOT use the machine in ways that differ from those that the machine has been designed for and described in this manual.
- DO NOT use the machine without the required guards for every machining process or removing part of the guards (DO NOT disassemble the fixed and mobile guards, bypass the safety microswitches)
- DO NOT use the machine in ways that differ from those described above (par. 1-8).
- DO NOT use the machine in environmental conditions that differ from the ones indicated above (part.1-10)
- DO NOT handle the tools without individual protective equipment (not supplied by SCM) for the hands and forearms.
- DO NOT use the machine without individual protective equipment from noise (ear plugs)(not supplied by SCM).
- DO NOT use the machine without extraction.
- DO NOT use the machine without having assessed the need to use individual protective equipment (not supplied by SCM) in relation to wood dust (we recommend the use of individual protective equipment: hard wood dust is carcinogenic).
- DO NOT use the machine if the area around the machine is not flat, well maintained and free of loose material (e.g. shavings and rejects).
- DO NOT machine different materials from the ones that the machine has been designed for and that are not set out in this manual.
- DO NOT machine materials of dimensions that the machine has not been designed for and that are not set out in this manual(par.1-8).
- DO NOT use tools not included in standard EN847-1 or of a size not compatible with the machine technical specifications.
- DO NOT make modifications to the machine.
- DO NOT allow children, domestic animals or any unauthorised personnel in the work area.

Performing modifications, voids the machine's Declaration of Conformity.

The user will be solely responsible for any damages resulting from improper use.

1.12 RESIDUAL RISKS

(=_ev-1-12_0.0)

Any machine tool may be potentially dangerous, do not forget it.
The final safety depends on you.

The machine is equipped with proper guards to ensure the safe machine operation.
Such guards are efficient if they are properly used and kept.

Even if the safety prescriptions are kept and the machine use occurs in accordance with the rules described in this handbook, the following risks may rise:

- **contact of parallel fence in horizontal position with saw blade and scorer blade.**
- **Contact with rotating members (belts, pulleys, chains ...).**
- **Kickback of the workpiece or of its parts (splits): never stop in the position corresponding to the trajectory of possible split ejection.**
- **Ejection of tool inserts: never stop in the position corresponding to the trajectory of possibile split ejection.**
- **Dust inhalation in case of working without suction.**
- **Fulguration caused by contact with hot parts.**
- **Contrary direction of tool rotation due to wrong electric connection.**
- **Danger due to wrong working position of the operator.**
- **Danger caused by the wrong tool fitting.**
- **Possible squashing of the hands, with the fixed parts of the machine, during the sliding table motion.**

1.13 OPERATOR'S TRAINING

(=_ev-1-13_0.0)

It is compulsory that the machine operator is trained for the machine set up and operation.
The operators shall carefully read this handbook and consider the safety rules.

In particular the training shall include:
a) the principles of the right use and operation of the machine.
b) The correct handling of the workpieces during the working.
c) The right position of the hands to the tools, before, during and after the cutting.
d) The right selection of the tools.
e) The piece feed to the tool which shall occur in the contrary direction to the spindle rotation direction.
f) The selection of the proper spindle speed required by the tool.

The operators are to be informed about the dangers due to the machine operation and about the precautions to be taken; besides the operator shall be able to carry out periodical tests on guards and safety devices.

NOTE-INFORMATION:
a padlock for locking the main switch of the power supply is required.
The authorized operator shall keep the key.

SAFETY OVER ALL

1.14 SAFETY RULES

(=_gg-1-13_0.0)

1- Carefully read this instructions manual completely before starting the machine.
2- Carefully read the warning plates applied on the machine and comply with their indications.
3- Only correctly trained personnel can use the machine.
4- The operator training must include information about the dangers associated with using the machine and the precautions that he must observe.
5- The operator must trained on the correct use of the guards and safety devices.
Moreover he must be trained to perform regular controls on the aforementioned guards and safety devices.
6- The operator must never leave the machine unattended while it is operating.
7- This machine has been designed to be used by one operator.
8- This machine has been manufactured to provide maximum safety along with optimum performance.
9- Unauthorised changes to the machine release the manufacturer of any responsibility from any damages that may result.
10- Do not use the machine under the influence of alcohol, drugs or sleep inducing medication.

The safety depends on you. Any machine tool may be potentially dangerous, do not forget it.

1.14.1 PERSONAL SAFETY

(=_gg-1-13-1_0.0)

1- Before starting the machine the operator shall already have read the handbook.
Your eyes are the best safety device you have: carefully look before moving.
2- Experience teaches that there are various objects on a person that can cause injuries; take off rings, watches, bracelets; button your sleeves tightly around yuor wrists, take off ties that could be caught in tight places, keep hair gathered underneath proper nets (cap, elastics, hair pins). Use prescribed footwear usually recommended by all countries.

ALWAYS WEAR THE FOLLOWING INDIVIDUAL PROTECTIVE EQUIPMENT (IPE) (NOT SUPPLIED BY THE SCM**) BEFORE STARTING TO WORK:**

A- Proper aprons, e.g: aprons made of double leather with synthetic fiber cloth insertion (not supplied by SCM**) to protect the operator in case of splinters ejection.**
B- Glasses or protective shields for your eyes.
C- Proper means for ear protection.
D- Proper means against dust inhalation (masks).
E- Gloves for handling the blades.
F- Proper shoes with reinforced steel point and rubber soles.

1.14.2 MACHINE SAFETY

(=_ev-1-14-2_0.0)

DANGER-WARNING:
always fasten the machine to the floor by inserting the pivots of the 2 brackets (S fig. 4.2) (supplied in the accessories bag) into the holes of machine; then screw down the M10 screws, (the machine is equipped with 1 front on right side hole "D" fig. 4.2 and 1 rear hole in central position "D1").

1- Be extremely careful when starting any working and periodically check the shields and safety devices.
Follow the instructions for grounding the machine's electrical system.
2- Never start the machine without having properly closed the covers in the area for blade and belt change.
3- Before starting the machine make sure that on the worktable or inside the guard there are no wood residues or parts which do not relate to the working.
4- Do not machine workpieces too small or too big for the machine.
See relative paragraph 3.1 "DIMENSIONS OF WORKPIECE TO BE MILLED".
Ensure that the pushers are intact and efficient.
5- Do not machine pieces with defects (deflections, clefts, knots, metallic parts, ...).
6- The guards and reference rules are to be fitted and set when the machine is off.
7- Work only with all guards properly fitted and efficient.
The use of the machine is not permitted if such conditions are not kept.
8- In case of long pieces use roller tables or table extensions (not supplied by SCM).
9- It is necessary to connect all suction hoods to the suction system.
Before starting the working make sure that the suction system is switched on.
10- Test working to check the cutterblock adjustment may not carried out without the guards required.
11- Never try to remove the wastes or other parts of the workpiece from the working area when the machine is in operation.
13- After a given working period the transmission belts get slack; this may cause an increase of the time required to stop the tool. In that case immediately stretch the belts (see paragraph 20.23 or 20.24).
14- Periodically remove chips and dust to avoid fire risk: carry out this operation always with the machine off.

1.14.3 TOOLS SAFETY

(=_ev-1-14-3_0 0)

1- Before fitting the tools, make sure that each support surface is clean, free from dents and perfectly flat.
2- The tools shall be fitted and set when the machine is off, STILL TOOLS and with proper instruments (gauge, comparator).
3- Make sure that the tools are perfectly balanced, sharp and well clamped.
Not sharp tools reduce not only the quality of the finished piece but they increase the piece kickback danger.
4- Fit the tools in the right working direction.
5- For fastening the saw blade to the spindle, the use of rings or bushes not prescribed by SCM is forbidden.
6- Never use deformed saw blades and do not exceed the speed limit indicated on them and prescribed by the tool manufacturer or by SCM.
Make sure that the dimensional limits and the specifications of the tools suitable for the machine have been stored.
7- Use only tools in accordance with EN 847-1 Norm and proper for manual feed.
8- Before starting the machine make sure that the tools do not touch the fixed parts of the machine.
9- Start working only when the tools have reached the right cutting speed.

1.14.4 WORKING AREA SAFETY

(=_gg-1-13-4_0.0)

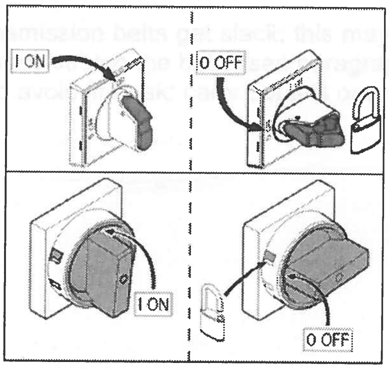
The working area shall have a good lighting and a sufficient room so that the operator is always out of a dangerous area.
The floor shall be well leveled to avoid slipping danger and also free from loose material (e.g. waste, chips).
Only the authorized operator may stay in the working area.
The operator shall never stay in the trajectory where eventual splits or tool parts are ejected.
If along this trajectory there is another work station (that is another machine) or a passage for persons, immediately install proper protective barriers.

1.14.5 MAINTENANCE SAFETY

(=_ev-1-14-5_0.0)

DO NOT THINK that the electric current is switched off during the maintenance .... CHECK IT PERSONALLY!
Strictly follow the indications provided for the frequency of the controls and maintenance of devices subject to checks and/or wear.

1- Before carrying out the cleaning, the maintenance, and the adjustments as well as the fitting or demounting of some machine member, turn the main switch to zero and lock it to stop the machine, disconnect the compressed air hose at the inlet of the filter unit, indicate it with a sign.
The operator who carries out the machine set up, maintenance and cleaning shall keep the only key.



2- Completely stop the machine before cleaning operations and before removing any guard to carry out the maintenance.
3- The general cleaning of the machine (in particular of worktable) and of the surrounding floor is an important safety factor.
4- Regularly carry out cleaning and maintenance operations: remove chips and dust to avoid fire risk.
5- Use proper gloves for handling the tools.
6- The tools require a regular maintenance: when necessary replace them.
7- In case of any trouble concerning the machine, the guards and the tools, it is necessary to immediately take the proper measures.

1.15 EMERGENCY CONDITIONS

(=_ev-1-15_0.0)

DANGER-WARNING:
in case of flooding of the room where the machine is housed, immediately disconnect the electric and pneumatic power supply. Before starting work, have the machine checked by a specialised technician.

DANGER-WARNING:
in case of fire, immediately disconnect the electrical power supply and intervene using suitable fire extinguishers directing the jets at the base of the flames. Even if the machine has suffered no apparent damage, before restarting work have the machine checked by a specialised technician.

A free space without obstructions must be provided around the machine (see par. 3.7), to allow fast escape in case of danger.

This machine must not be operated in explosive environments.

1.16 MACHINE REMOVAL - STORING - DEMOLITION

(=_ev-1-16_0.0)

To remove the machine, disconnect it from the electric and pneumatic system. Follow the instructions in chap. 4.

In case of extended inactivity of the machine, disconnect it from the electrical and pneumatic system. Thoroughly clean it as already described for ordinary cleaning and cover the work and sliding tables and the tool holder spindles with antirust protection. Do not store the machine in humid environments and protect it from atmospheric agents.

The machine is constructed in non-toxic unharmful materials. In case of demolition, separate the ferrous material from the plastic materials and send them to the respective scrap yards.

1.16.1 OUT OF ORDER MACHINE

(=_1.16.1)

The machine is manufactured with non-toxic or harmful materials; in case of scrapping separate the ferrous materials from the plastic materials and scrap respectively. We recommend contacting a specialised and authorised company, in compliance with the applicable laws and standards.

The operators moving the machine and the maintenance personnel must wear the IPE required for the risks involved with the type of use and in compliance with the applicable laws and standards.

To move and transport the machine refer to the instructions in section 4.

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2.1 Arrangement and description of emergency devices (Fig. 2.1) 2

2.2 Arrangement and description of safety devices (Fig. 2.2) 4

2.1 ARRANGEMENT AND DESCRIPTION OF EMERGENCY DEVICES (FIG. 2.1)

(=_ev-2-1.0.0)

Emergency equipment consists of special devices whereby operators can promptly stop the machine if necessary or in case of danger.

DANGER-WARNING:
emergency devices must never be removed or disconnected for no reason whatsoever, as required by "Direttiva macchine" 2006/42/CE.

Description

A - **Emergency mushroom-head push-button:**
it causes an immediate emergency stop.

A1 - **Emergency mushroom-head push-button:**
it causes an immediate emergency stop.

CAUTION:
periodically, check that the devices, listed above, are efficient.

DANGER-WARNING:
any anomalies found during the control of these devices, must be reported promptly to the manager, who will put the machine out of service and call the SCM ***Support Service.***

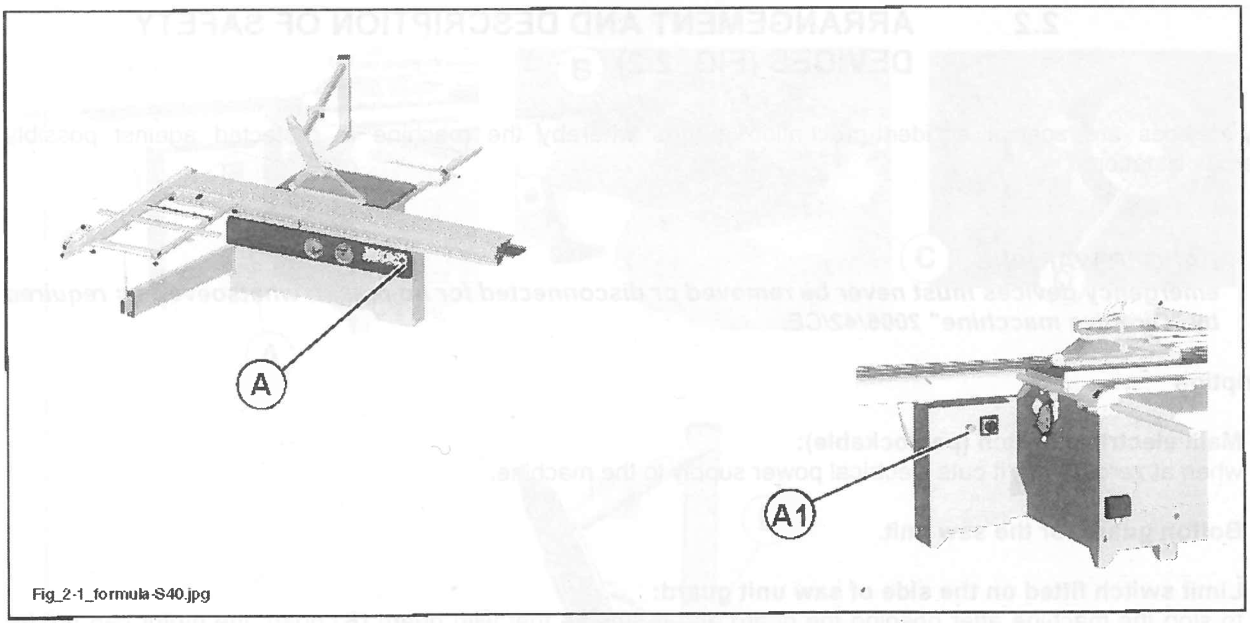

Fig_2-1_formula-S40.jpg

Fig. 2.1

2.2 ARRANGEMENT AND DESCRIPTION OF SAFETY DEVICES (FIG. 2.2)

(=_ev-2-2.0.0)

Safety devices are special accident-prevention guards whereby the machine is protected against possibly dangerous situations.

DANGER-WARNING:
emergency devices must never be removed or disconnected for no reason whatsoever, as required by "Direttiva macchine" 2006/42/CE.

Description

A - **Main electrical switch (padlockable):**
when at zero (OFF), it cuts electrical power supply to the machine.

B - **Botton guard for the saw unit.**

C - **Limit switch fitted on the side of saw unit guard:**
to stop the machine after opening the guard and to ensure that with guard (B) open, the motor can not be started.

D - **Automatic brake:**
it acts directly on working unit.

E - **Hanging guard for saw blade and scorer:**
the guard is made of material (alumium + polycarbonate) so that the saw blade is not damaged if it touches the guard.

CAUTION:
periodically, check that the devices, listed above, are efficient.

DANGER-WARNING:
any anomalies found during the control of these devices, must be reported promptly to the manager, who will put the machine out of service and call the SCM ***Support Service.***

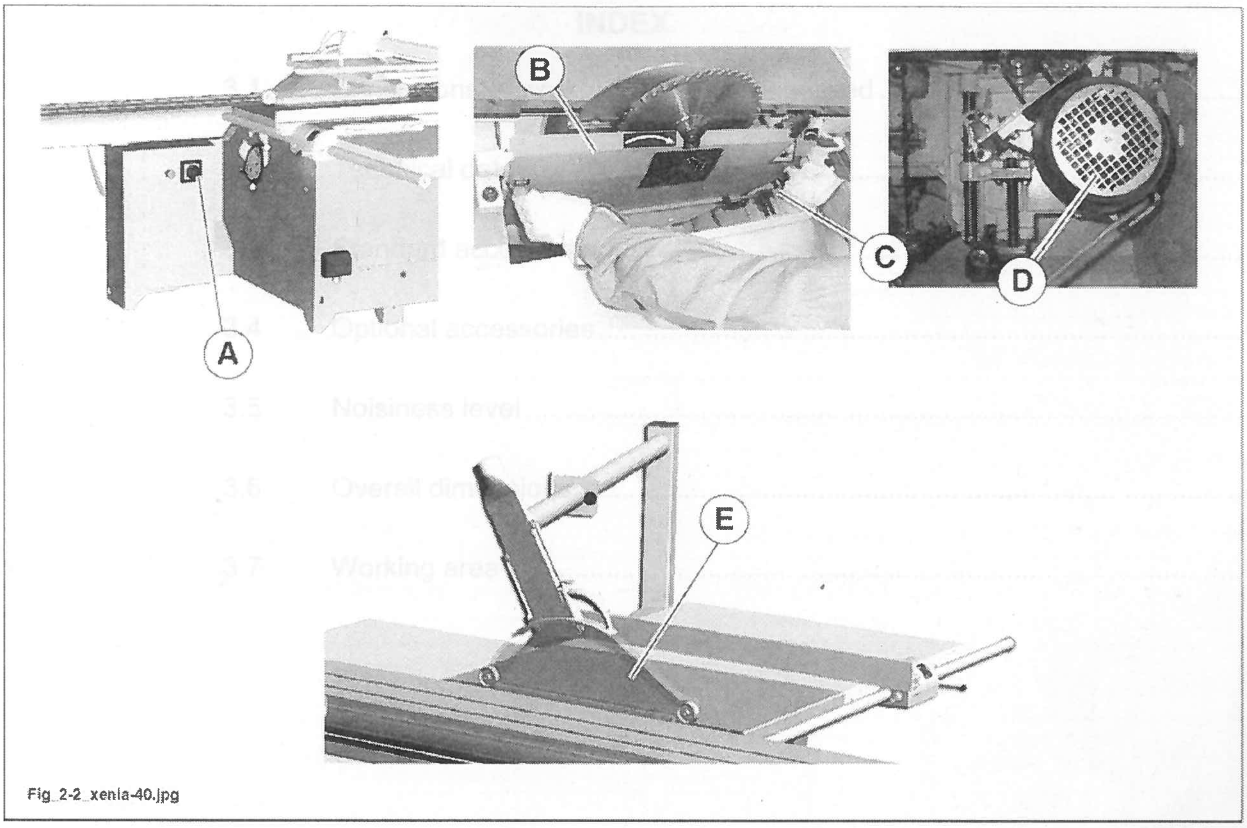
B
C
D
A
E
Fig_2-2_xenia-40.jpg

Fig. 2.2

ARRANGEMENT AND DESCRIPTION OF SAFETY DEVICES

[illegible] emergency devices must never be removed or [illegible] for no reason whatsoever, as required by [illegible] Machines 2006/42/CE [illegible]

Description

A - **Main electrical switch (padlockable):**
when at zero (OFF), it cuts electrical power [illegible]

B - **Bottom guard for the saw unit**

C - **Limit switch fitted on the side of saw unit guard:**
to stop the machine after opening the guard [illegible] that with guard (B) open, the motor can not be started

D - **Automatic brake:**
it acts directly on working unit

E - **Hanging guard for saw blade and scorer:**
the guard is made of material (aluminium / polycarbonate) so that the saw blade is not damaged if it touches the guard

CAUTION:
periodically, check that the devices, listed above, are efficient

DANGER-WARNING:
any anomalies found during the control of these devices, must be reported promptly to the manager, who will put the machine out of service and call the SCM Support Service.

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3.2 Technical data 3
3.3 Standard accessories 5
3.4 Optional accessories 6
3.5 Noisiness level 7
3.6 Overall dimensions 8
3.7 Working area 9

3.1 DIMENSIONS OF WORKPIECE TO BE THICKNESSED

(=_ev_3-1_0.0)

DIMENSIONS OF WORKPIECE TO BE CUT			
Max. thickness	With Ø 400 saw blade	140	mm
Max. thickness	With Ø 350 saw blade	115	mm
Max. thickness	With Ø 300 saw blade	90	mm
Min. thickness		3	mm
Min. dimension (Length)	For squaring	30	mm
Min. dimension (Width)	For squaring	150	mm
Max. dimension (Length)	For squaring - 3200 sliding table	3200	mm
Max. dimension (Width)	For squaring - 3200 sliding table	3200	mm
Min. width	For cutting at the parallel fence	10	mm
Max. width	For cutting at the parallel fence	1270	mm
Max. width (OPT)	For cutting at the parallel fence	1000	mm
Max. width (OPT)	For cutting at the parallel fence	1500	mm

3.2 TECHNICAL DATA

(= ev 3-2 0.0)

GENERAL SPECIFICATIONS			
Dimensions of fixed table		1040 x 630	mm
Dimensions of sliding table	3200 sliding table	3200 x 360	mm
Squaring width with sliding table and extendable stop	3200 sliding table	3200 x 3200	mm
Saw blade tilt angle		from 90° to 45°	
Max. saw blade diameter		Øi 30 x 400	mm
Min saw blade diameter		Øi 30 x 300	mm
Scorer blade diameter		Øi 20 x120	mm
Max. cutting height (90° blade position)	With 400 mm blade	20 - 140	mm
Max. cutting height (45° blade position)	With 400 mm blade	14 - 99	mm
Max. cutting height (90° blade position)	With 350 mm blade	0 - 115	mm
Max. cutting height (45° blade position)	With 350 mm blade	0 - 81	mm
Max. cutting height (90° blade position)	With 300 mm blade	0 - 90	mm
Max. cutting height (45° blade position)	With 300 mm blade	0 - 63	mm
Saw blade rotation speed		3700	rpm
Time required to stop the saw blade:		less than 10 seconds	
Scorer blade rotation speed		8500	rpm
Cutting width with parallel fence		1270	mm
Motors:			
Saw motor power rating:	50 Hz	7,0	kW
Scorer motor power rating:	50 Hz	0,9	kW
Technical details: see data plate on the motor Duty cycle: S6 - 40% (excluded from the energy efficiency constraints of EC Commission Regulation 640/2009) Conditions of service: see Par. 1.10			
Net weight: see identification plate located on the machine			

SUCTION SYSTEM SPECIFICATIONS		
Diameter of the suction under the table	Ø 120	mm
Diameter of the suction on the hood of hanging guard (separated from the riving knife)	Ø 80	mm
Air speed	20	m/sec
Air consumption	1200	m³/h
Vacuum value inside the fitting under the table [Ø 120 mm]	560	Pa
Vacuum value inside the fitting on the hanging guard hood (separated from the riving knife) [Ø 80 mm]	1410	Pa

3.3 STANDARD ACCESSORIES

(=_ev_3-3_0.0)

Table extensions
Frame with rule for square cuts
Additional rule for square cuts
Fence for parallel cuts with micrometric adjustment
Sliding table made of aluminium alloy with motion on guides
Tile-shaped stop
2 Riving knives
2 Brackets (for fastening the machine to the floor)
Pusher
Handle for pusher

Direct start of main motor
Trasformer for auxiliary circuit 110 V
Motor overload cutout
Auto-brake motor

Mechanic display for saw unit tilting

Scorer unit with independent motorisation

Hanging guard for saw blade and scorer with suction pipe of Ø 80 mm diameter

Set of tools and wrenches for use and maintenance

3.4 OPTIONAL ACCESSORIES

(=_ev_3-4_0.0)

Eccentric clamping arm

Cutting width with parallel fence: 1000 or 1500 mm

Additional device for parallel cuts

Device for oblique cuts

Device for oblique cuts with stop position compensation

Saw motor with automatic starting - S6 / 40%:
.... 9,0 kW - 50 Hz (11,0 kW - 60 Hz)

Squaring fence with no. 2 LCD readouts for stops position

Manual fence for parallel cuts with electronic reader

Automatic 0-star-delta saw motor starting

3.5 NOISINESS LEVEL

(=_ev_3-5_0.0)

Operating conditions		Cut with circular saw		(in accordance with EN 1870-1:2007+A1:2009)*	
Description of size measured		Reference norm	Uncertainty K (probability 68.27%)	Cut with circular saw	
Lop:Level of sound pressure at operator position dB(A) and peak level [dB(C)]	Operator positions	EN ISO 11201:1995	2.5	VSA	LAV
	INFEED			87.5	93.5 [104.1]
Lw:sound power level emitted dB(A) re 1pw [mW(A)]		EN ISO 3744:1995	2.0	95.2 [3.3]	107.1 [51.1]
The maximum istantaneus noise level pressure is under 130 dB (C).					
VSA:Idle working without suction			LAV:In operation		
* Consult Test Report 08005 for the analysis of the operating conditions used which are different to what is required by the standards indicated above					

Rdp:Test report

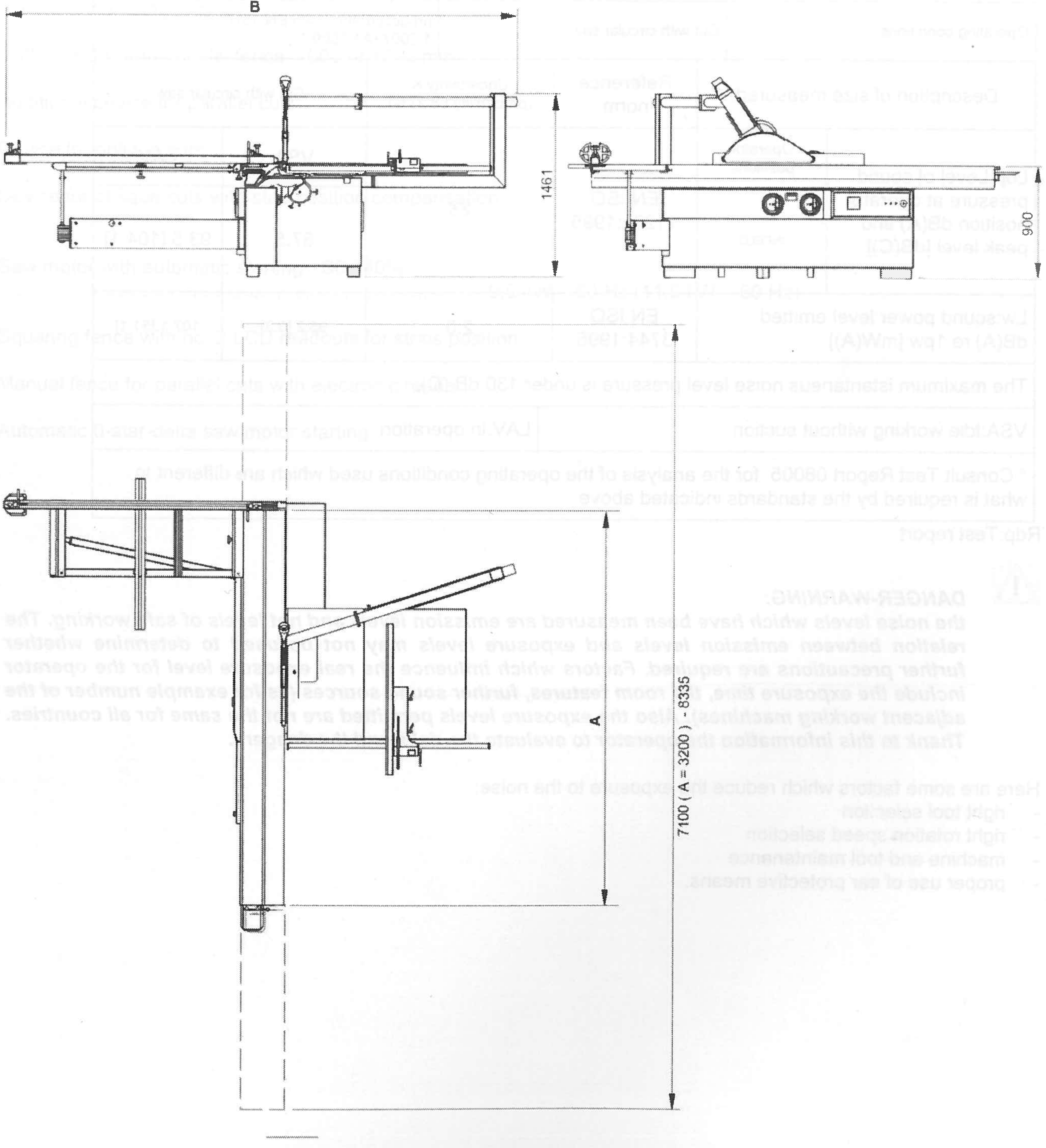
DANGER-WARNING:
the noise levels which have been measured are emission levels and not levels of safe working. The relation between emission levels and exposure levels may not be used to determine whether further precautions are required. Factors which influence the real exposure level for the operator include the exposure time, the room features, further sound sources (as for example number of the adjacent working machines). Also the exposure levels permitted are not the same for all countries. Thank to this information the operator to evaluate the risks and the dangers.

Here are some factors which reduce the exposure to the noise:

- right tool selection
- right rotation speed selection
- machine and tool maintenance
- proper use of ear protective means.

3.6 OVERALL DIMENSIONS

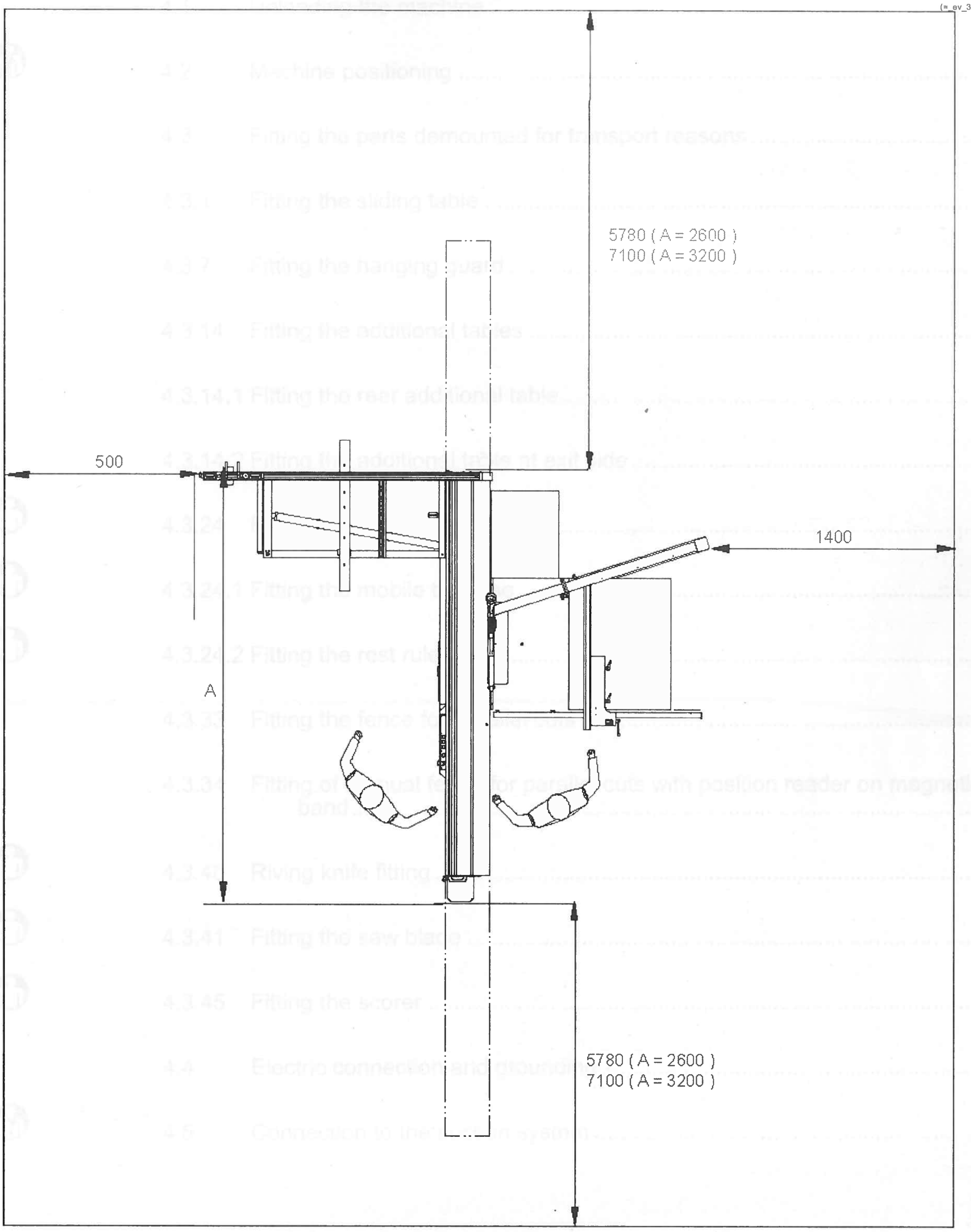
(=_ev_3-6_0.0)



B = 5155 **Cutting width with parallel fence 1270 mm**

B = 4870 **Cutting width with parallel fence 1000 mm** OPT
B = 5370 **Cutting width with parallel fence 1500 mm** OPT

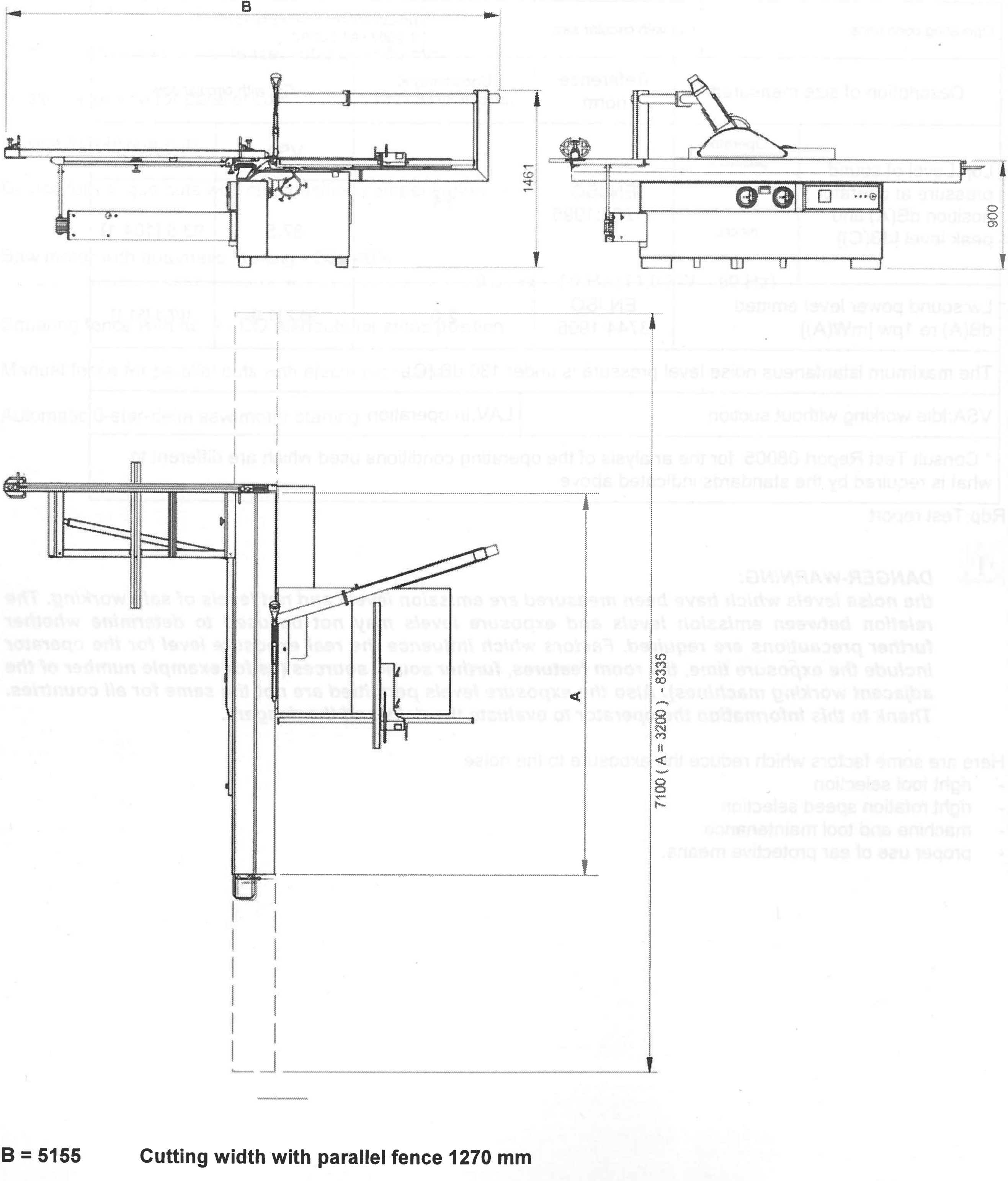
3.7 WORKING AREA


(= ev_3-7_0.0)
5780 (A = 2600)
7100 (A = 3200)
500
1400
A
5780 (A = 2600)
7100 (A = 3200)

CAUTION:
the measures above indicated are to be considered as the free room of the working area.

3.6 OVERALL DIMENSIONS

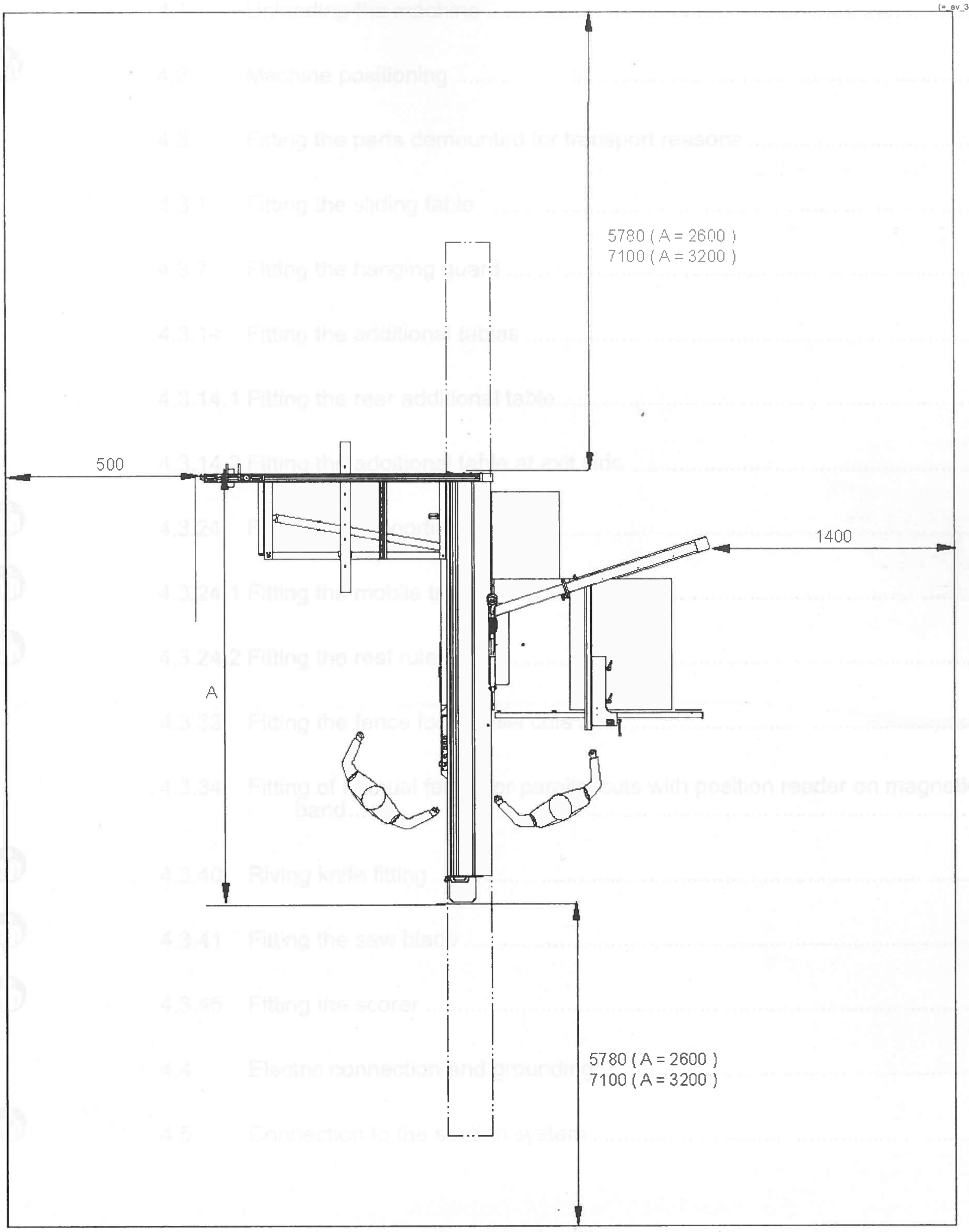
(=_ev_3-6_0.0)



B = 5155 **Cutting width with parallel fence 1270 mm**

B = 4870 **Cutting width with parallel fence 1000 mm** OPT
B = 5370 **Cutting width with parallel fence 1500 mm** OPT

3.7 WORKING AREA


(=_ev_3-7_0.0)
5780 (A = 2600)
7100 (A = 3200)
500
1400
A
5780 (A = 2600)
7100 (A = 3200)

CAUTION:
the measures above indicated are to be considered as the free room of the working area.

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4.1 UNLOADING THE MACHINE

(=_ev_4-1_0.0)

NOTE-INFORMATION:
the packing of the machine indicates:
- the weight to be raised
- the hooking areas

Before unloading the machine take off all parts rested on it for packing and transport reasons.

DANGER-WARNING:
- the machine shall be lifted by crane or other raising means by hooking the slings as shown in fig. 4.1.
- Make sure that the crane, the slings as well as the fork truck are proper for lifting the machine.

During the lifting avoid sudden motions.
As an alternative, the machine (when equipped with wood socles or pallets) may be lifted by means of lift truck.
In that case insert the forks under the machine frame see fig.4.1; carefully raise the machine to avoid any possible turnover of the machine.

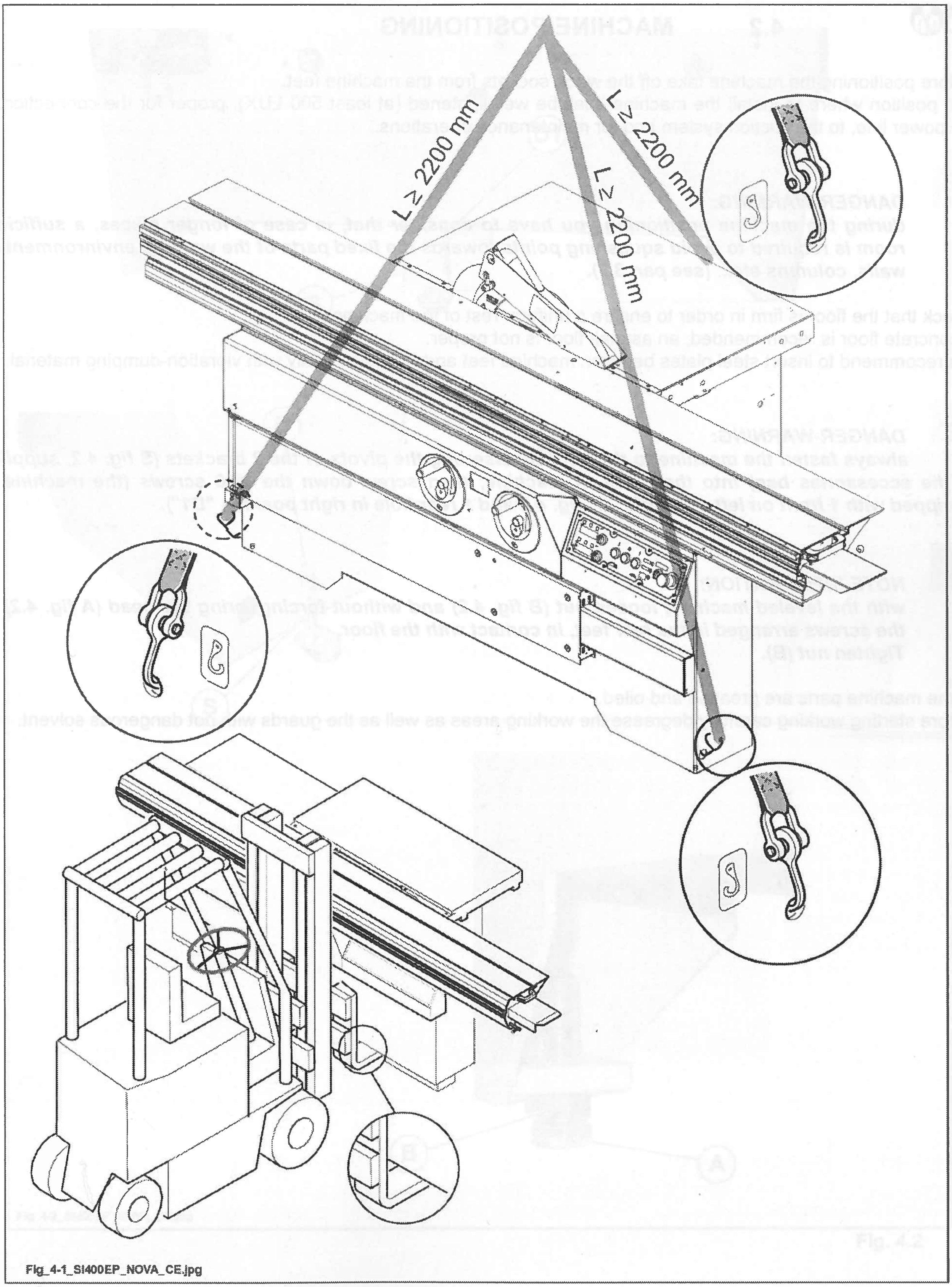

L ≥ 2200 mm
L ≥ 2200 mm
L ≥ 2200 mm
Fig_4-1_SI400EP_NOVA_CE.jpg

Fig. 4.1

4.2 MACHINE POSITIONING

(=_av_4-2_0 0)

Before positioning the machine take off the wood sockets from the machine feet.
The position where to install the machine shall be well lightened (at least 500 LUX), proper for the connection to the power line, to the suction system and for maintenance operations.

DANGER-WARNING:
during the machine positioning you have to consider that, in case of longer pieces, a sufficient room is required to avoid squashing points towards the fixed parts of the working envinronment as walls, columns etc... (see par. 3.7).

Check that the floor is firm in order to ensure a uniform rest of the machine.
A concrete floor is recommended; an asphalt floor is not proper.
We recommend to insert steel plates between machine feet and floor eventually with vibration-dumping material.

DANGER-WARNING:
always fasten the machine to the floor by inserting the pivots of the 2 brackets (S fig. 4.2, supplied in the accessories bag) into the holes of machine; then screw down the M10 screws (the machine is equipped with 1 front on left side hole "D" fig. 4.2 and 1 rear hole in right position "D1").

NOTE-INFORMATION:
with the leveled machine, loosen nut (B fig. 4.2) and without forcing, bring the head (A fig. 4.2) of the screws arranged in the rear feet, in contact with the floor.
Tighten nut (B).

Some machine parts are greased and oiled.
Before starting working carefully degrease the working areas as well as the guards with not dangerous solvent.

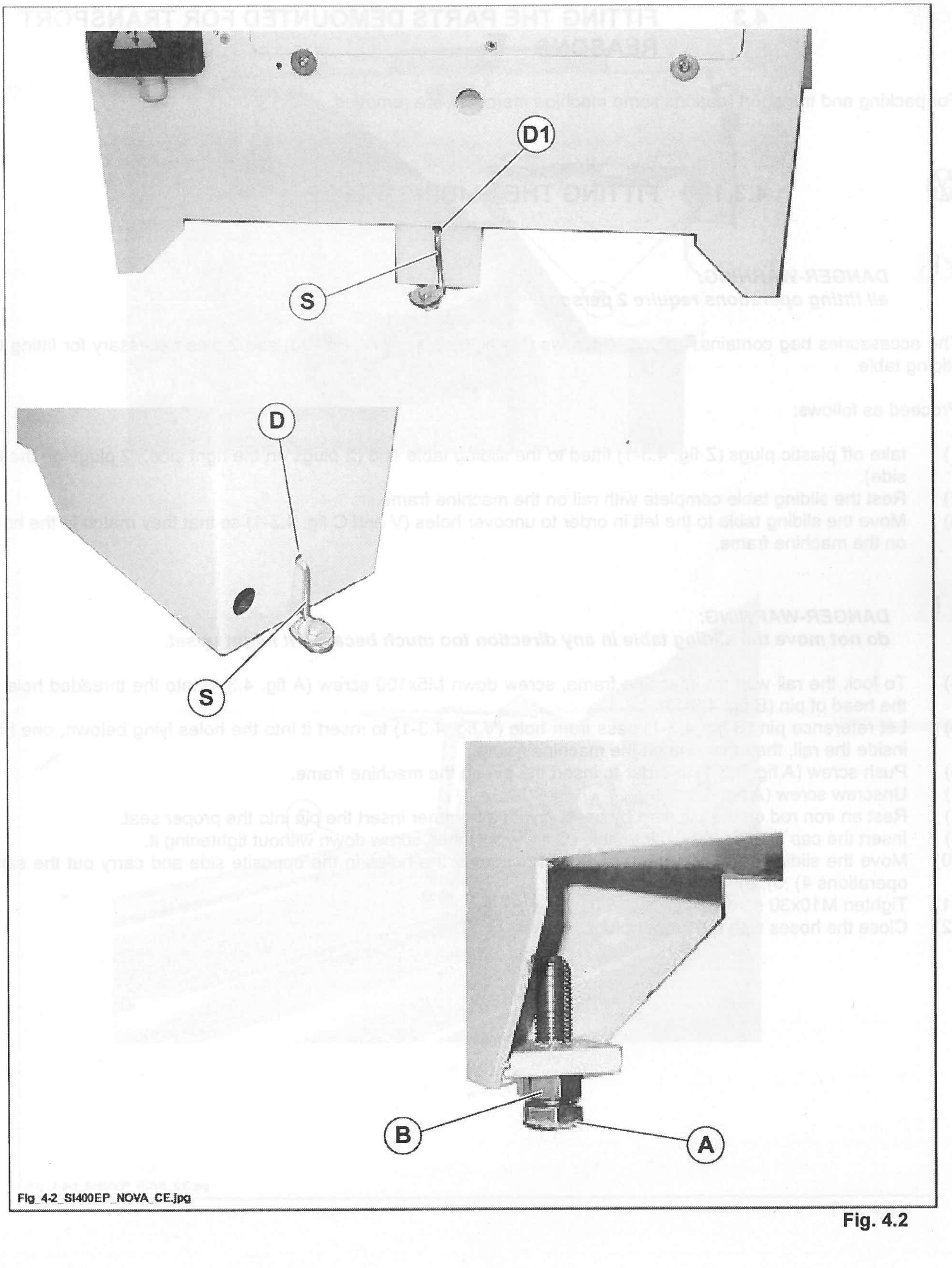

D1
S
D
S
B
A
Fig_4-2_SI400EP_NOVA_CE.jpg

Fig. 4.2

4.3 FITTING THE PARTS DEMOUNTED FOR TRANSPORT REASONS

(=_ev_4-3_0.0)

For packing and transport reasons some machine members are removed.

4.3.1 FITTING THE SLIDING TABLE

(=_ev_4-3-1_0.0)

DANGER-WARNING:
all fitting operations require 2 persons.

The accessories bag contains 4 plugs, 4 screws (M10x30), 1 screw (M5x100) and 2 pins necessary for fitting the sliding table.

Proceed as follows:

1) take off plastic plugs (Z fig. 4.3-1) fitted to the sliding table end (2 plugs on the right side, 2 plugs on the left side).
2) Rest the sliding table complete with rail on the machine frame.
3) Move the sliding table to the left in order to uncover holes (V and C fig. 4.3-1) so that they match to the holes on the machine frame.

DANGER-WARNING:
do not move the sliding table in any direction too much because it might upset.

4) To lock the rail with the machine frame, screw down M5x100 screw (A fig. 4.3-1) into the threaded hole on the head of pin (B fig. 4.3-1).
5) Let reference pin (B fig. 4.3-1) pass from hole (V fig. 4.3-1) to insert it into the holes lying belown, one hole inside the rail, the other one on the machine frame.
6) Push screw (A fig. 4.3-1) in order to insert the pin on the machine frame.
7) Unscrew screw (A fig. 4.3-1).
8) Rest an iron rod on the pin then by beating with a hammer insert the pin into the proper seat.
9) Insert the cap screw M10x30 into hole (C fig. 4.3-1) then screw down without tightening it.
10) Move the sliding tale to the right in order to uncover the holes in the opposite side and carry out the same operations 4) ,5), 6), 7), 8) and 9).
11) Tighten M10x30 screws.
12) Close the hoses with the proper plugs.

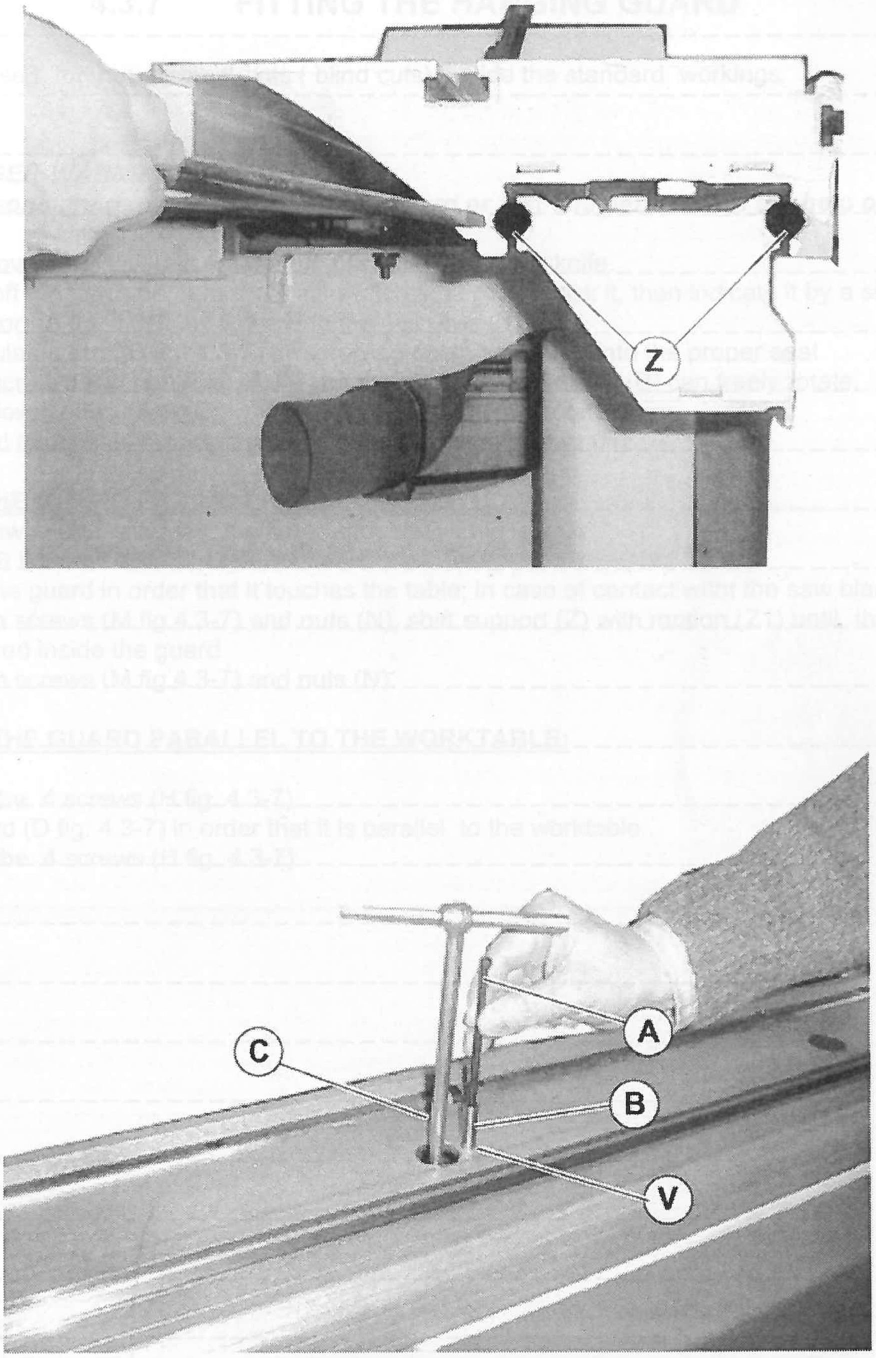


Fig 4-3-1_SI400EP_NOVA_CE.jpg

Fig. 4.3-1

(=_vuota_4_01)

4.3.7 FITTING THE HANGING GUARD

(=_hd_4-3-7_0.0)

Guard to be used for not- through cuts (blind cuts) beside the standard workings.

DANGER-WARNING:
2 persons are required for fitting the guard or just one person with the help of a hoist.

- Totally lower the saw unit or take off the tools and riving knife.
- Switch off the machine, turn the main switch to zero and lock it, then indicate it by a sign.
- Fit support (A fig. 4.3-7) by tightening the 4 screws (V).
- Fit articulated arm (B fig. 4.3-7) by screwing down screw (E) into the proper seat.
- Lightly screw down nut (F fig. 4.3-7) so that the articulated arm (B) can freely rotate.
- Screw down small knob (G fig. 4.3-7) for locking the articulated arm.
- Fit guard (C fig. 4.3-7) to arm (B) by tightening the 4 screws (H).

TO CHECK THE GUARD FITTING PROCEED AS FOLLOWS:

- fit the saw blade with max. diameter and relative riving knife.
- Totally fit the saw unit.
- Lower the guard in order that it touches the table; in case of contact witht the saw blade proceed as follows:
  - loosen screws (M fig.4.3-7) and nuts (N), shift support (Z) with motion (Z1) until the saw blade is perfectly centered inside the guard
  - tighten screws (M fig.4.3-7) and nuts (N).

TO ADJUST THE GUARD PARALLEL TO THE WORKTABLE:

- loosen the 4 screws (H fig. 4.3-7)
- set guard (D fig. 4.3-7) in order that it is parallel to the worktable .
- tighten the 4 screws (H fig. 4.3-7)

TO ADJUST THE GUARD HEIGHT :

DANGER-WARNING:
the guard has been adjusted at factory so that with the saw blade of max diemter the lfiting of the bottom guard edge does not exceed 5 mm above the highest tooth of the saw blade, never tamper it.

- fit the saw blade with max. diameter and relative riving knife
- totally lift the saw unit
- raise the guard with handle (R fig.4.3-7) as much as possible by holding spring (T) pressed
- make sure that with the saw blade of max. diameter the lifting of the bottom guard edge does not exceed 5 mm above the highest tooth of the saw blade
- if such condition is not kept, operate on nuts (N fig.4.3-7) in order to reach the right height.

DANGER-WARNING:
never remove the guard.
Before starting to work, ensure that the guard is resting against the workpiece and, at the end of the operations, lower it until it comes into contact with the table.

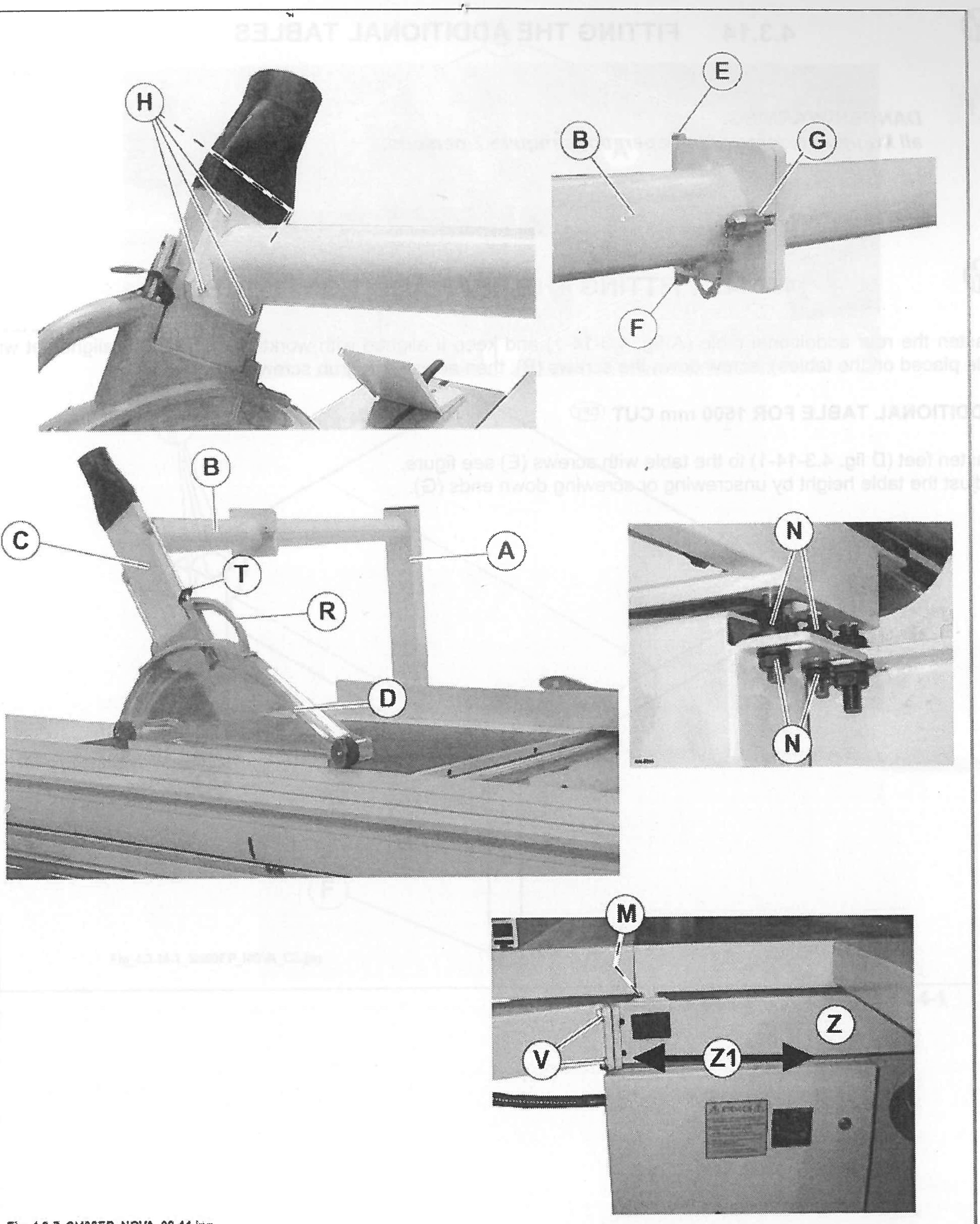

H
E
B
G
F
B
C
A
T
R
D
N
N
M
Z
V
Z1

Fig_4.3-7_SI400EP_NOVA_09-11.jpg

Fig. 4.3-7

4.3.14 FITTING THE ADDITIONAL TABLES

(=_ev_4-3-14_0.0)

DANGER-WARNING:
all fitting and demounting operations require 2 persons.

4.3.14.1 FITTING THE REAR ADDITIONAL TABLE

(=_ev_4-3-14-1_0.0)

Fasten the rear addditional table (A fig. 4.3-14-1) and keep it aligned with worktable (check the alignemet with a rule placed on the tables), screw down the screws (B), then adjust with grub screws (L).

ADDITIONAL TABLE FOR 1500 mm CUT (OPT)

Fasten feet (D fig. 4.3-14-1) to the table with screws (E) see figure.
Adjust the table height by unscrewing or screwing down ends (G).

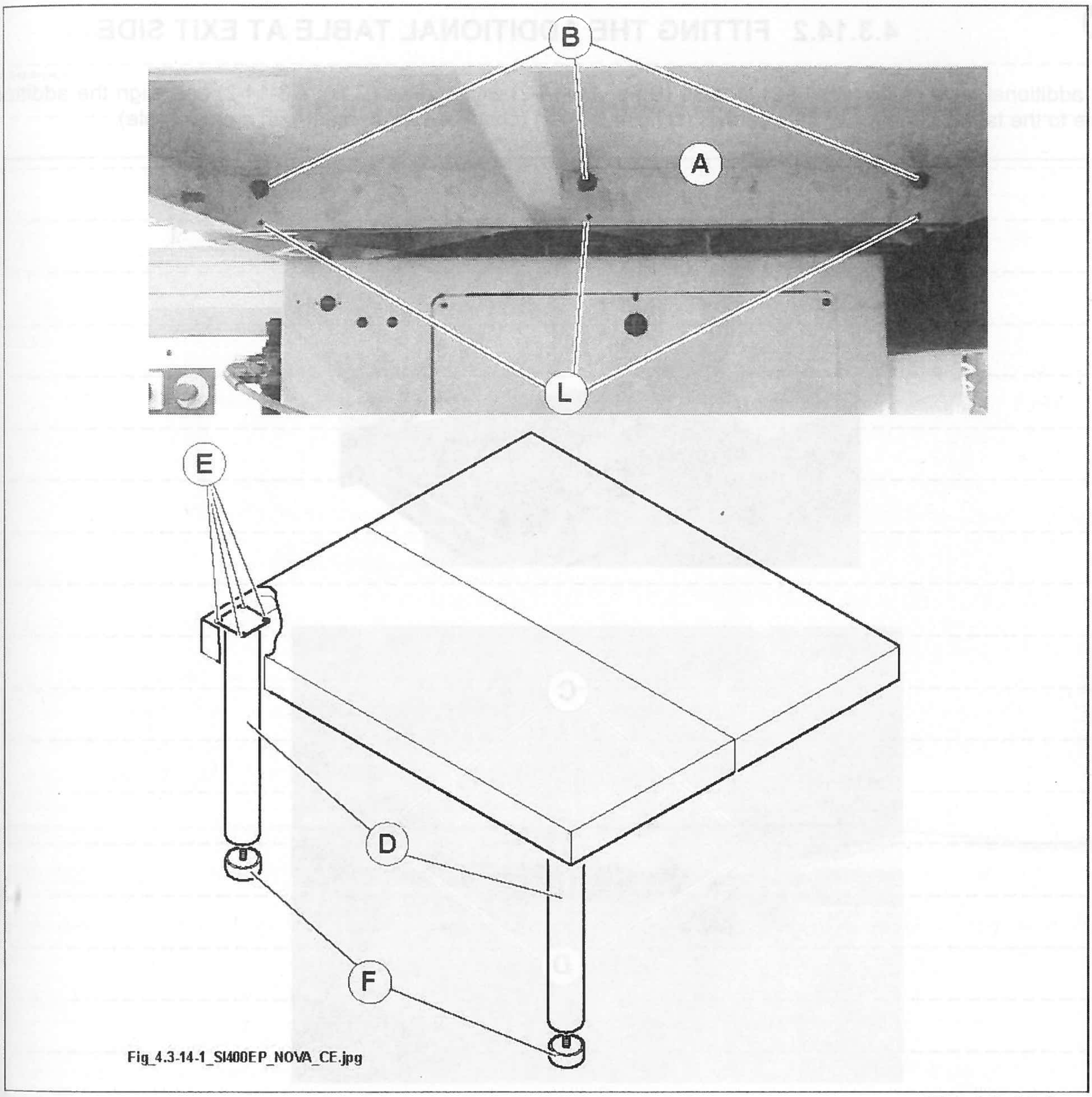

B
A
L
E
D
F
Fig_4.3-14-1_SI400EP_NOVA_CE.jpg

Fig. 4.3-14-1

4.3.14.2 FITTING THE ADDITIONAL TABLE AT EXIT SIDE

(=_ev_4-3-14-2_0 0)

Fix additional table (A fig. 4.3-14-2) to table (B fig. 4.3-14-2) with screws (C fig. 4.3-14-2) and align the additional table to the table by means of grub screws (D fig. 4.3-14-2) (check the alignement with a proper rule).

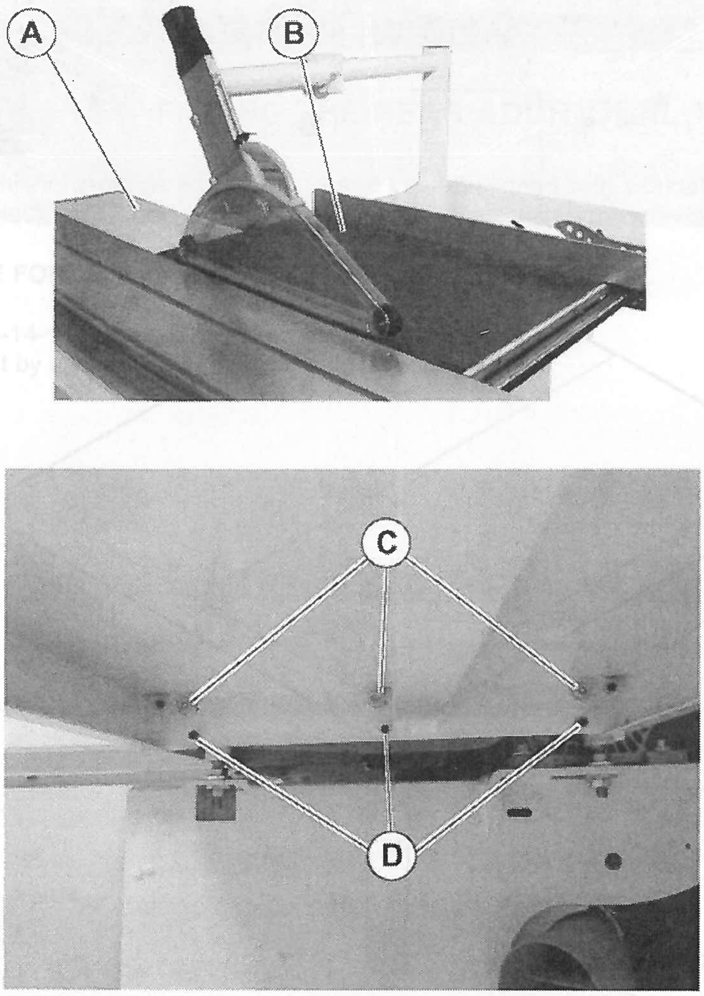


Fig_4.3-14-2_SI400EP_NOVA_09-11.jpg

Fig. 4.3-14-2

(=_nst-4b)

4.3.24 FITTING THE SUPPORTING FRAME

(=_hd_4.3-24_0.0)

NOTE-INFORMATION:
for transport reasons the frame is demounted from the machine.

DANGER-WARNING:
all fitting operations require 2 persons.

- Fit pivot (A fig. 4.3-24) into the end of pivoting arm (B fig. 4.3-24) then lock by means of nut (C fig. 4.3-24) supplied in the accessories bag)
- Fit frame (D fig. 4.3-24) to groove (E fig. 4.3-24) of the sliding table, then tighten knob (M fig. 4.3-24).
- Rest the rear part of the frame on pivot (A fig. 4.3-24) which shall fit into the proper seat.

4.3.24.1 FITTING THE MOBILE TRAVERSE

(=_hd_4.3.24.1_0.0)

Fit threaded pivots (R fig.4.3-24) into holes (S fig.4.3-24) of the frame.
For locking the traverse (T fig.4.3-24), fit spacer (V fig.4.3-24) and washer (W fig.4.3-24) to the threaded pivots, then tighten knobs (U fig.4.3-24).

4.3.24.2 FITTING THE REST RULE

(=_hd_4.3.24.2_0.0)

For fitting the rest rule (F fig. 4.3-24) proceed as follows:

1) Insert the 2 sliding pivots (P and P1 fig. 4.3-24) into the 2 holes (G and G1 fig. 4.3-24) of the frame.
2) Lock the rule on the frame by means of the 2 knobs (H fig. 4.3-24) (supplied in accessories bag) on the bottom side of the frame .
   Rule end (L fig. 4.3-24) shall be aligned with be aligned with the saw blade to be used as a chip breaker during the cutting.

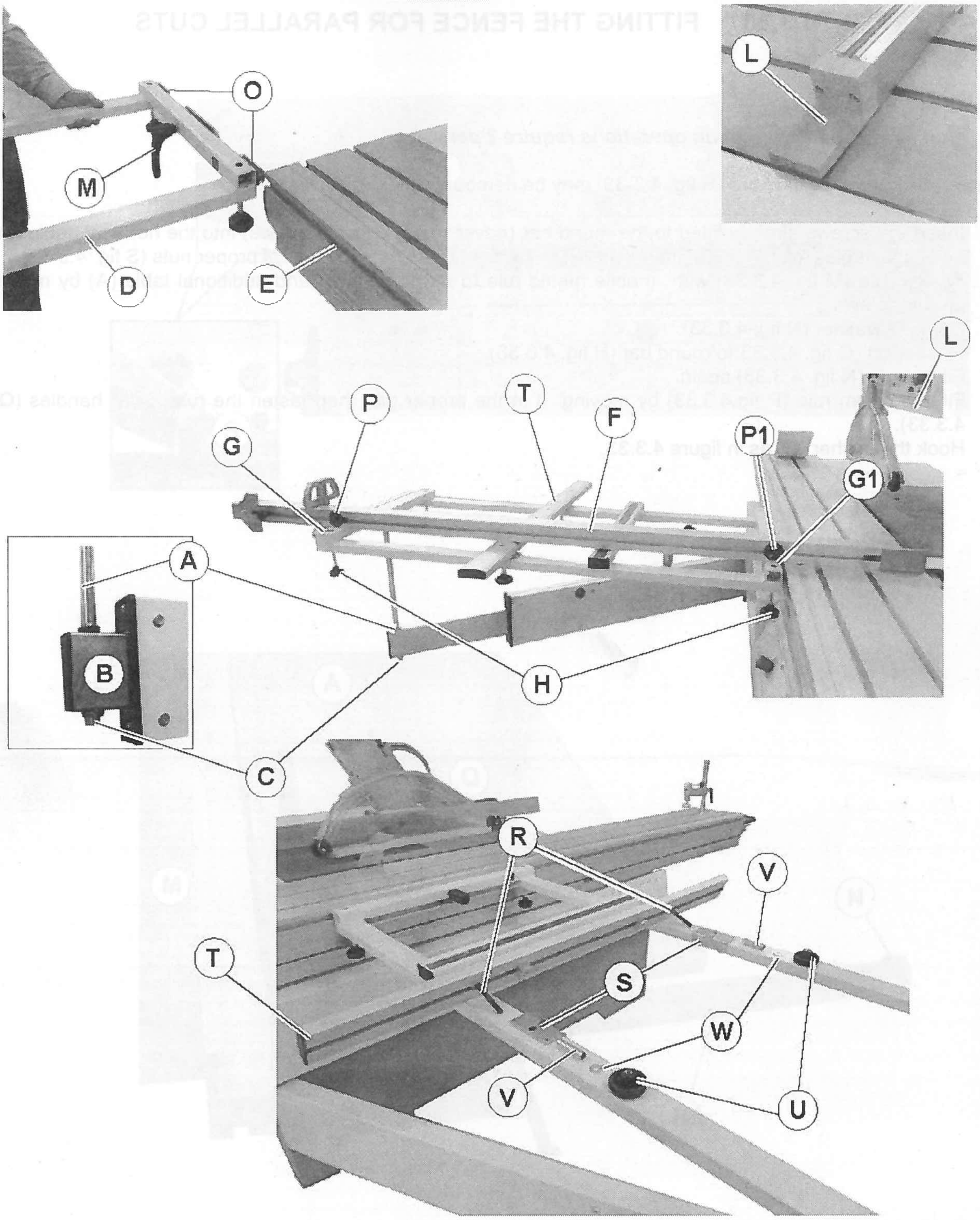

O
M
D
E
L
P
T
F
G
P1
G1
L
A
B
H
C
R
V
T
S
W
V
U

Fig_4.3-24_XENIA-40M.jpg

Fig. 4.3-24

4.3.33 FITTING THE FENCE FOR PARALLEL CUTS

(=_gu_4.3.33_0.0)

DANGER-WARNING:
all fitting and demounting operations require 2 persons.

For transport reasons round bar (H fig. 4.3-33) may be demounted.

- Insert the screws already fitted to the round bar (never remove these screws) into the holes of table and of additional table (A fig. 4.3.33), then fasten it in the right position by means of proper nuts (S fig. 4.3.33).
- Fasten rule (M fig. 4.3.33) with mobile metric rule to the fixed table and additional table (A) by means of proper screws.
- Remove washer (N fig. 4.3.33).
- Fit support (O fig. 4.3.33)to round bar (H fig. 4.3.33).
- Fit washer (N fig. 4.3.33) again.
- Fit aluminium rule (P fig.4.3.33) by moving it in the proper gib, then fasten the rule with handles (Q fig. 4.3.33).
- Hook the pusher (C) as in figure 4.3.33.

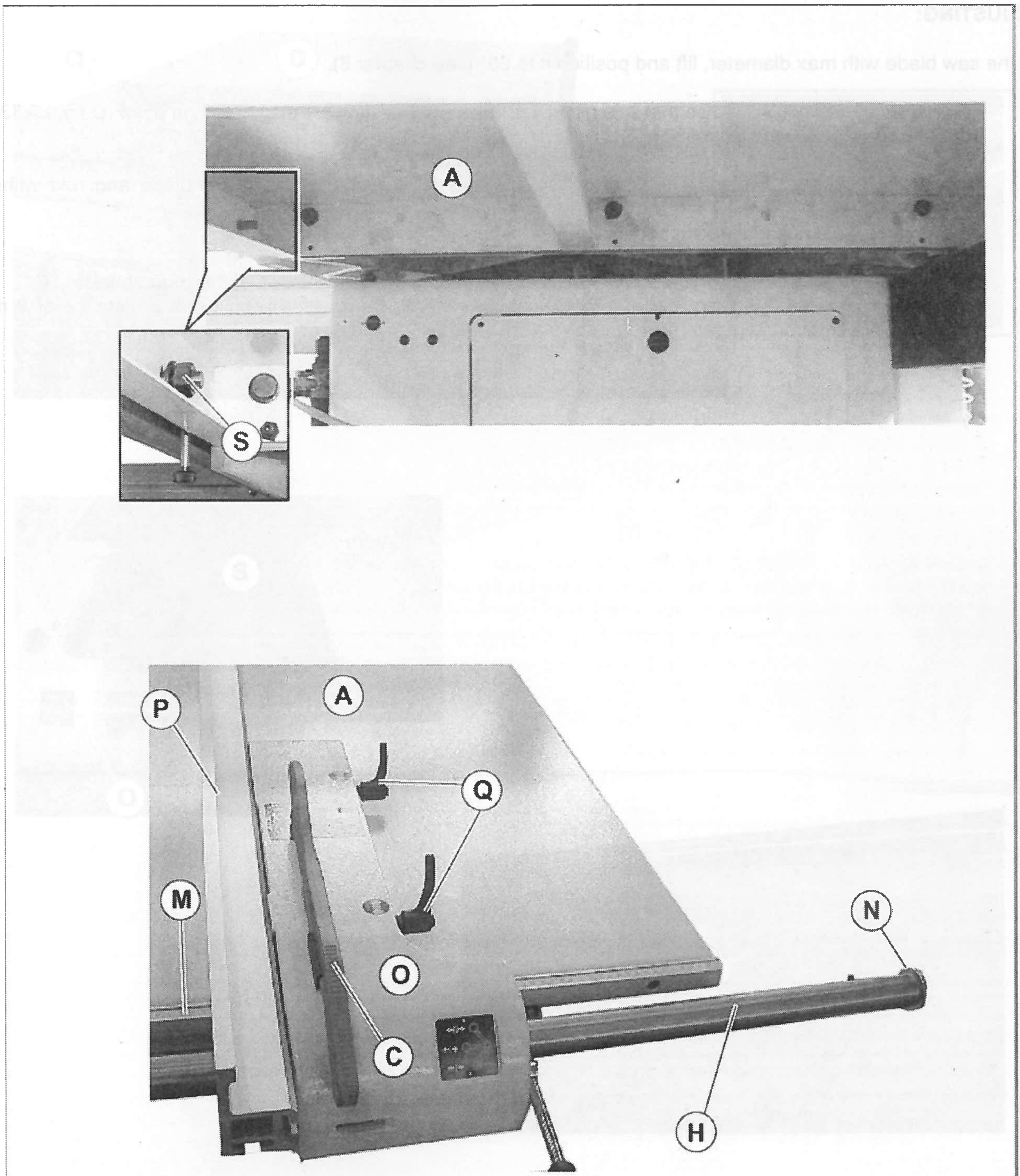

A
S
A
P
Q
M
N
O
C
H
Fig_4.3-33_SI400EP_NOVA.jpg

Fig. 4.3-33

ADJUSTING:

Fit the saw blade with max.diameter, lift and position it to 90° (see chapter 6).

1) Move support (O fig.4.3.33A) so that rule (P fig.4.3.33A) touches the saw blade tooth in point (D fig.4.3.33A), without forcing and lock it in position.
2) Insert the supplied shim (Q fig.4.3.33A) between the saw blade and rule see fig.4.3.33A
3) Move nut (S fig.4.3.33A) and counternut (S1) until the shim rests between saw blade and rule without forcing.
4) After every adjusting position support(O fig.4.3.33A)as indicated in item 1).
5) Turn saw blade by 180° and make sure that the condition item 3)is kept.
6) Tighten nuts (T fig.4.3.33A) of the additional table by keeping the straightness of the round bar.
7) Adjust screw (V fig.4.3.33A)so that rule (P fig.4.3.33A) in vertical position remains at a distance of 2 mm from the saw blade then tighten the counternut.

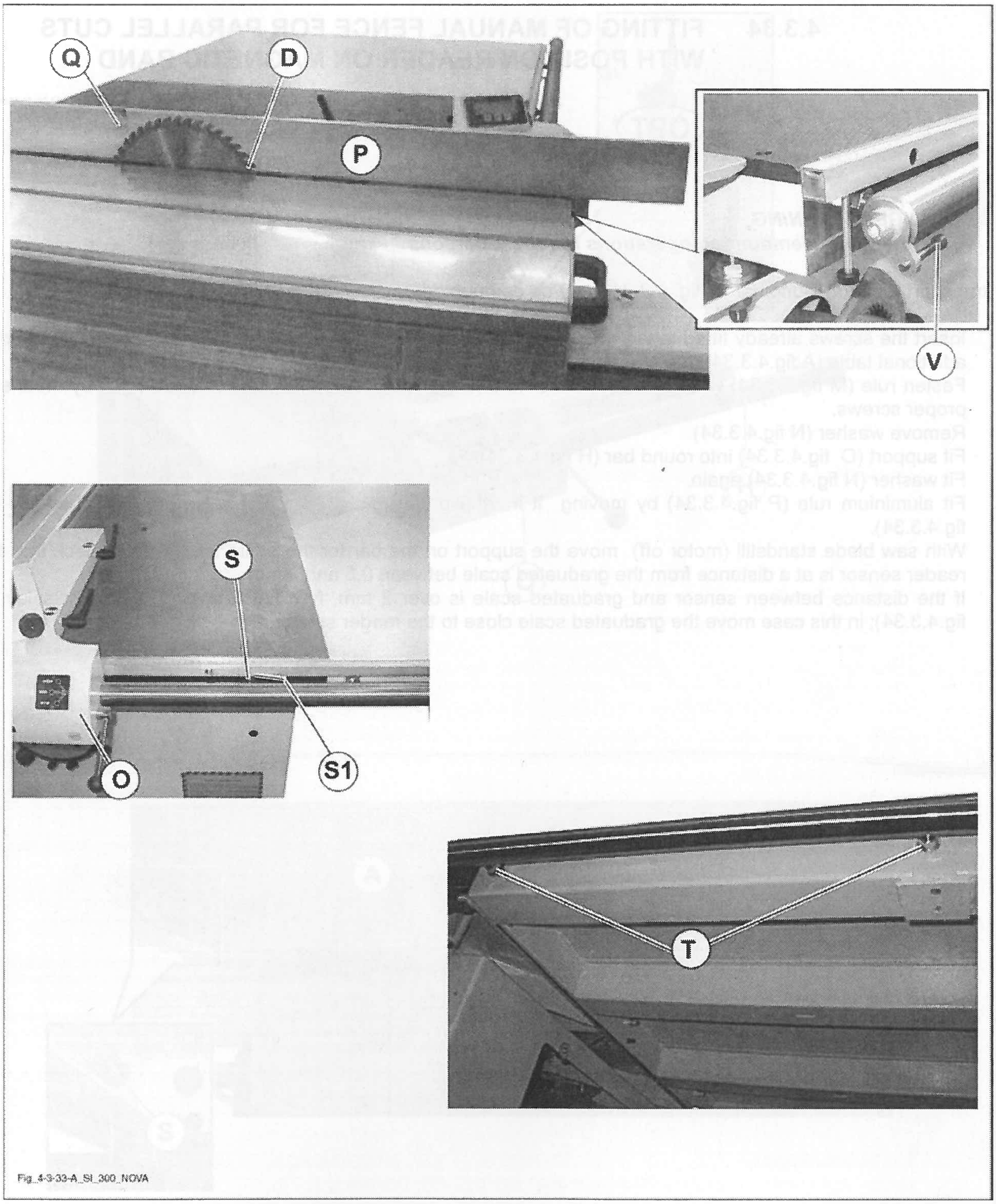

Q
D
P
V
S
O
S1
T
Fig_4-3-33-A_SI_300_NOVA

Fig. 4.3-33-A

4.3.34 FITTING OF MANUAL FENCE FOR PARALLEL CUTS WITH POSITION READER ON MAGNETIC BAND

(=_hd_4.3.34_0 0)

OPT

DANGER-WARNING:
all fitting and demounting operations require 2 persons.

For transport reasons round bar (H fig. 4.3.34) may be demounted.

1) Insert the screws already fitted to the round bar (never remove these screws) into the holes of table and of additional table (A fig.4.3.34), then fasten it in the right position by means of proper nuts (S fig.4.3.34).
2) Fasten rule (M fig.4.3.34) with mobile metric rule to the fixed table and additional table (A) by means of proper screws.
3) Remove washer (N fig.4.3.34).
4) Fit support (O fig.4.3.34) into round bar (H fig.4.3.34).
5) Fit washer (N fig.4.3.34) again.
6) Fit aluminium rule (P fig.4.3.34) by moving it in the proper gib, then fasten the rule with handles (Q fig.4.3.34).
7) With saw blade standstill (motor off) move the support on the bar for the entire length and check that the reader sensor is at a distance from the graduated scale between 0,5 and 2 mm.
8) If the distance between sensor and graduated scale is over 2 mm, NO TAPE appears on the display (V fig.4.3.34); in this case move the graduated scale close to the reader sensor.

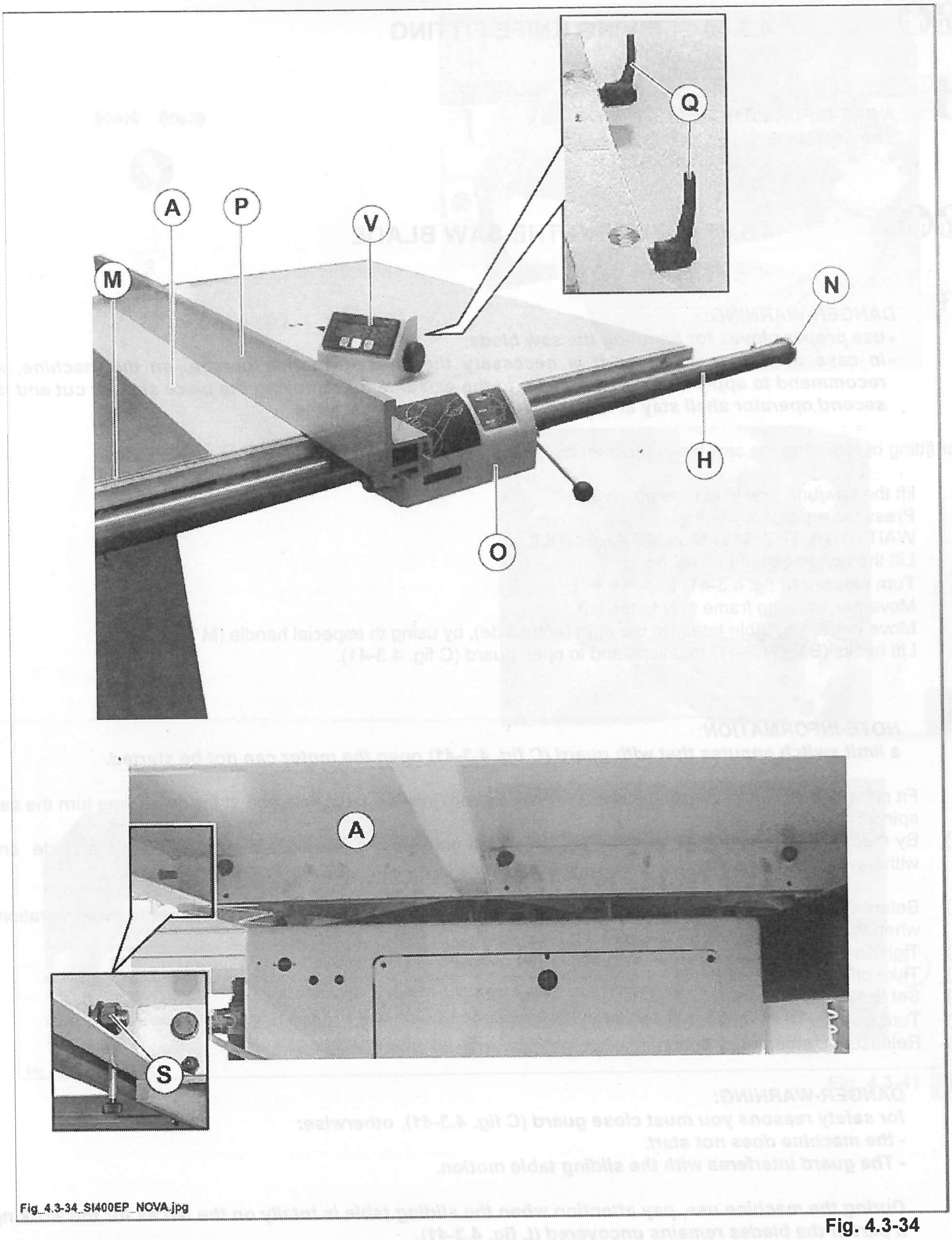

Q
A
P
V
M
N
H
O
A
S
Fig_4.3-34_SI400EP_NOVA.jpg

Fig. 4.3-34

4.3.40 RIVING KNIFE FITTING

(=_hd_4.3.40_0.0)

NOTE-INFORMATION:
see Section 6.

4.3.41 FITTING THE SAW BLADE

(=_he_4.3.41_0.0)

DANGER-WARNING:
- use proper gloves for handling the saw blade.
- In case of large pieces and it is necessary the help of another person, on the machine, we recommend to apply an extension table to the exit side for removing the piece already cut and the second operator shall stay at the exit side of the additional table.

For fitting or replacing the saw blade proceed as follows:

1) lift the saw unit totally up (see par. 6.3.1).
2) Press the emergency button.
3) WAIT UNTIL THE SAW BLADES ARE STILL.
4) Lift the hanging guard totally up.
5) Turn selector (3 fig. 4.3-41) to (◀(●)▶).
6) Move the squaring frame fully to the left.
7) Move the sliding table totally to the right (entry side), by using th especial handle (M fig. 4.3-41).
8) Lift hooks (B fig. 4.3-41) to unlock and to open guard (C fig. 4.3-41).

NOTE-INFORMATION:
a limit switch ensures that with guard (C fig. 4.3-41) open the motor can not be started.

9) Fit pivot (A fig.4.3-41) (supplied in the accessories bag) into the table hole and at the same time turn the saw spindle in order to lock it.
10) By means of a wrench fully unscrew clockwise the nut (E fig. 4. fig. 4.3-41) which secures the blade and withdrawand one flange (H).

11) Before fitting the saw blade make sure that both flanges (H fig. 4.3-41) are clean in order to avoid vibrations when the saw blade is rotating.
12) Tighten nut (E)
13) Take off pivot (A fig. 4.3-41)
14) Set the hanging guard
15) Turn selector (3 fig. 4.3-41) to (▶(●)◀).
16) Release the emergency button.

DANGER-WARNING:
for safety reasons you must close guard (C fig. 4.3-41), otherwise:
- the machine does not start.
- The guard interferes with the sliding table motion.

During the machine use, pay attention when the sliding table is totally on the left as for the working a part of the blades remains uncovered (L fig. 4.3-41).

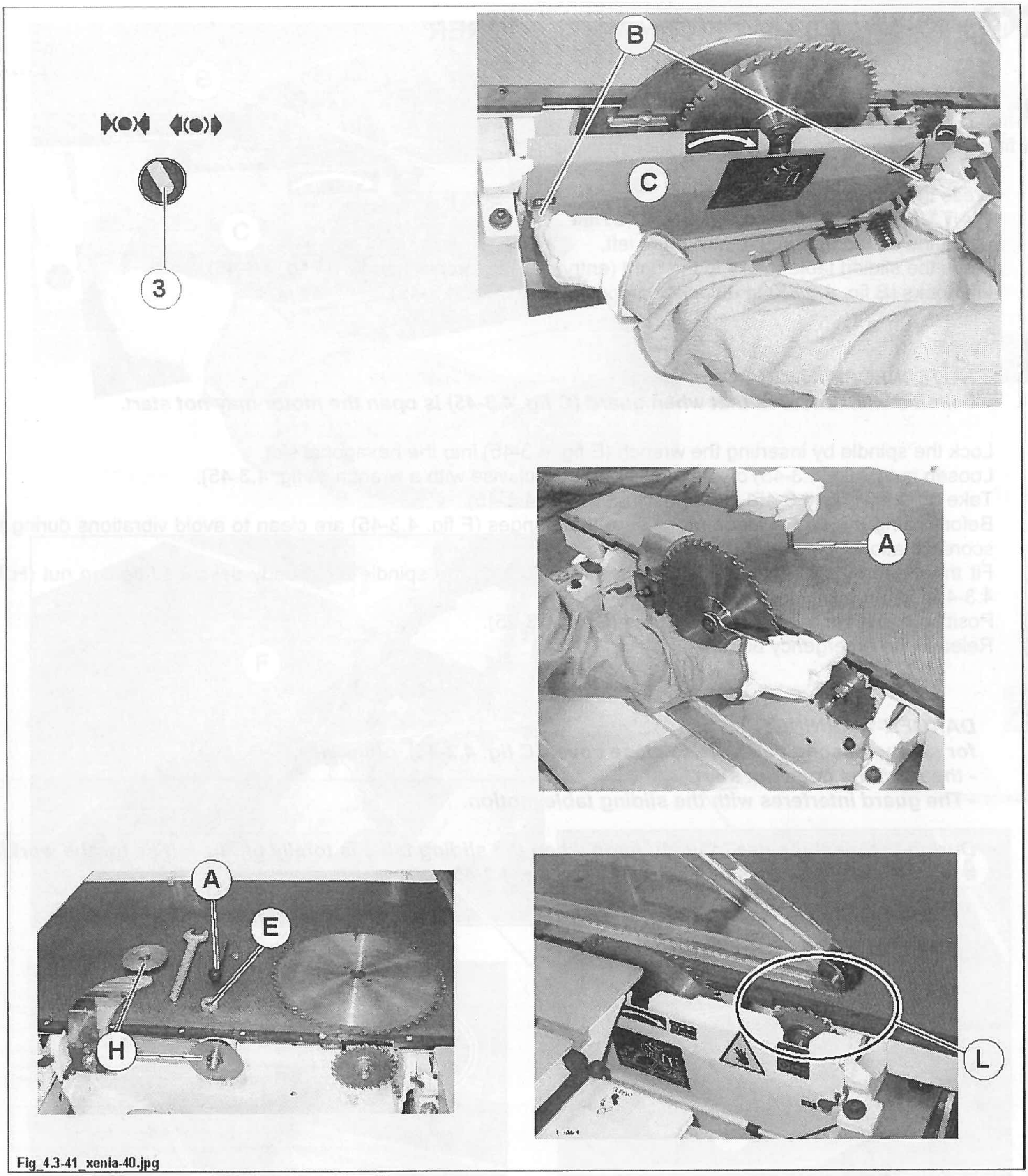


Fig_4.3-41_xenia-40.jpg

Fig. 4.3-41

4.3.45 FITTING THE SCORER

(=_ev_4-3-45_0.0)

DANGER-WARNING:

For fitting or replacing the scorer blade proceed in this way:

1) press the emergency button.
2) WAIT UNTIL THE SAW-BLADES ARE STILL.
3) Move the squaring frame totally to the left.
4) Move the sliding table totally to the right (entry side) by proper handle (M fig. 4.3-45).
5) Lift hooks (B fig. 4.3-45) to unlock and open cover (C fig. 4.3-45).

NOTE-INFORMATION:
a limit switch ensures that when guard (C fig. 4.3-45) is open the motor may not start.

6) Lock the spindle by inserting the wrench (E fig. 4.3-45) into the hexagonal slot.
7) Loosen nut (H fig. 4.3-45) by turning it counterclockwise with a wrench (A fig. 4.3-45).
8) Take off nut (H fig. 4.3-45) and one flange (F fig. 4.3-45).
9) Before fitting the scorer blade make sure that flanges (F fig. 4.3-45) are clean to avoid vibrations during the scorer rotation.
10) Fit the scorer blade, flange and nut; then after locking the spindle as already described tighten nut (H fig. 4.3-45) by turning it clockwise.
11) Position again the guard for saw blades (C fig. 4.3-45).
12) Release the emergency button.

DANGER-WARNING:
for safety reasons you have to close cover (C fig. 4.3-45), otherwise:
- the machine does not start.
- The guard interferes with the sliding table motion.

During the machine use, pay attention when the sliding table is totally on the left as for the working a part of the blades remains uncovered (L fig. 4.3-45).

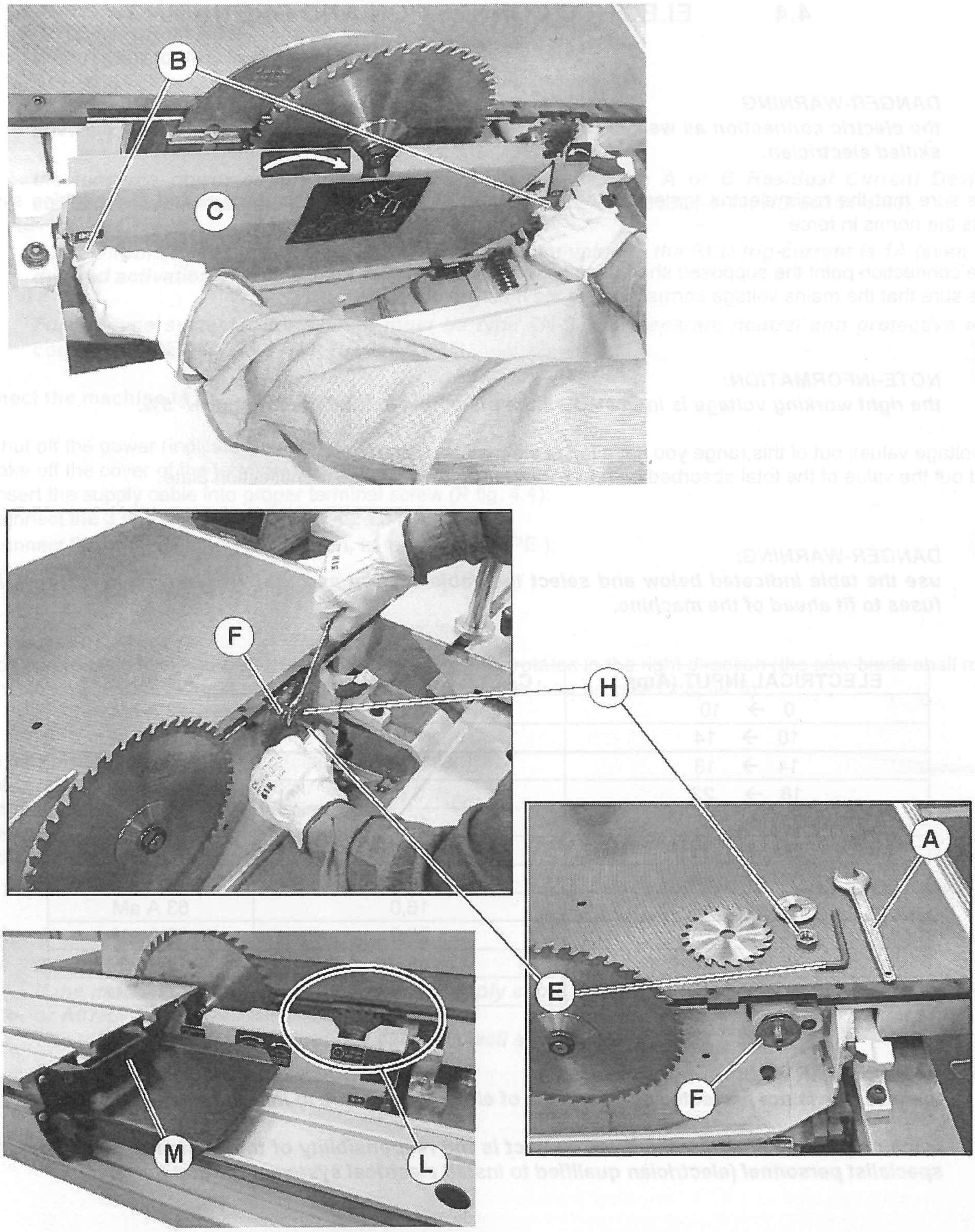


Fig_4.3-45_SI400EP_NOVA_09-11.jpg

Fig. 4.3-45

4.4 ELECTRIC CONNECTION AND GROUNDING

(=_ev_4-4_0.0)

DANGER-WARNING:
the electric connection as well as the check operations described later on shall be carried out by a skilled electrician.

Make sure that the main electric system of the factory can absorb the machine power and that earthing system meets the norms in force.

In the connection point the supposed short-circuit current shall be lower than 10 kA.
Make sure that the mains voltage corresponds to the machine one.

NOTE-INFORMATION:
the right working voltage is indicated on the plate fig.4.4; tolerance range: +/- 5%.

For voltage values out of this range you have to set the mains voltage.
Read out the value of the total absorbed current (Ampere) on the machine identification plate.

DANGER-WARNING:
use the table indicated below and select the cable section and the "RETARDED INTERVENTION" fuses to fit ahead of the machine.

ELECTRICAL INPUT (Amp.)	CABLE SECTION (mm²)	AM FUSE
0 → 10	2,5	12 A aM
10 → 14	4,0	16 A aM
14 → 18	6,0	20 A aM
18 → 22	6,0	25 A aM
22 → 28	10,0	32 A aM
28 → 36	10,0	40 A aM
36 → 46	16,0	50 A aM
46 → 54	16,0	63 A aM
54 → 76	25,0	80 A aM
76 → 92	35,0	100 A aM
92 → 110	50,0	125 A aM

DANGER-WARNING:
the machine is not protected against risks of electrocution due to indirect contact

Machine protection against indirect contact is the responsibility of the Customer, which must use specialist personnel (electrician qualified to install electrical systems) for that purpose.

NOTE-INFORMATION:
With regard to this, in the following systems:

1) TT type, Low Voltage, mains-powered
2) TN type, Medium Voltage, mains-powered

the machine power supply line must be protected by type A or B Residual Current Devices, suitably coordinated with the user's earthing system (ref. IEC 60364-4-41; HD 60364-4-41).

For environments at greater risk of fire, the maximum value of the RCD trip current is 1A (even with delayed activation).

For TN type systems, the system must be type TN-S with separate neutral and protective earth conductors (IEC 60364-4-482; HD 384.4.482).

Connect the machine to the elecric system by proceeding as follows:

- shut off the power (indicate it by a sign);
- take off the cover of the terminal board (C fig. 4.4);
- insert the supply cable into proper terminal screw (P fig. 4.4);
- connect the 3 phases to terminals L1-L2-L3 (fig. 4.4);
- connect the ground cable yellow-green, to terminal (⏚ / PE);
- fit the cover of terminal board C;
- clamp terminal screw (P fig. 4.4).

Switch on the mains voltage and check that the saw spindle rotates in the right direction (the saw blade shall rotate against the piece feed) after starting the machine as described later on (see Chapter 5).

If the saw blade rotation is not right (clockwise direction) :
- shut off the power;
- interchange 2 phases on the terminal board;
- switch on the power;
- check the rotation direction again.

CAUTION:
if the machine is connected by a mobile supply cable, use a flexible rubber cable marked H07RN-F or A07RN-F.
The relative socket shall meet DIN 49463 as well as IEC 309-1 and IEC 309-2.

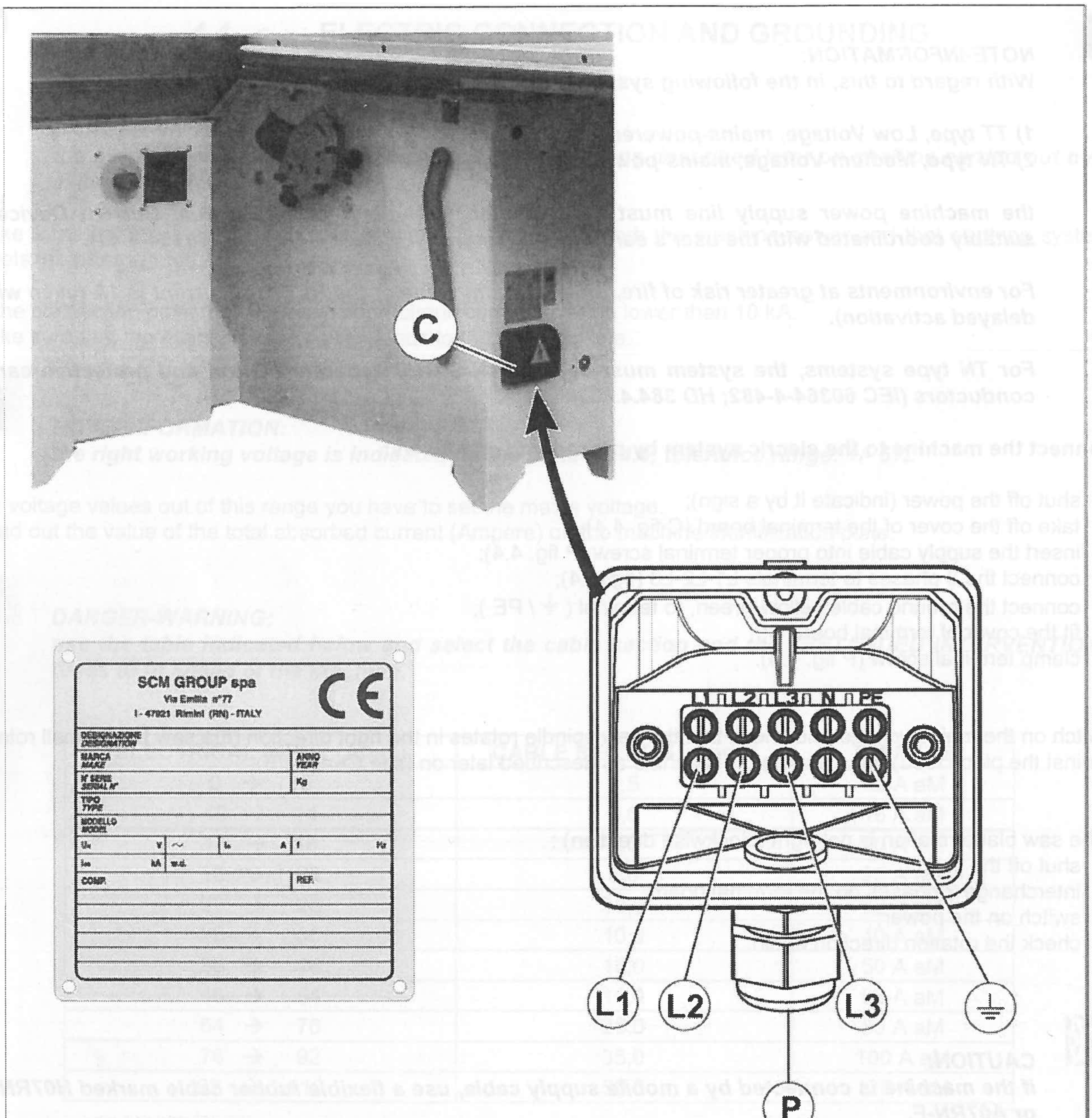

C
L1 L2 L3 N PE
L1
L2
L3
P
SCM GROUP spa
Via Emilia n°77
I - 47921 Rimini (RN) - ITALY
DESIGNAZIONE DESIGNATION
MARCA MAKE
ANNO YEAR
N° SERIE SERIAL N°
Kg
TIPO TYPE
MODELLO MODEL
Un V ~ In A f Hz
Icn kA s.d.
COMP.
REF.

Fig_4-4_SI300_nova_CE_09-11.jpg

Fig. 4.4

NOTE-INFORMATION:
the documentation with wiring diagram and certificates is inside the accessories case.

4.5 CONNECTION TO THE SUCTION SYSTEM

(=_ev_4-5_0.0)

DANGER-WARNING:
the connection to the suction system is necessary for the machine operation and for the operator's safety. Always work with the suction system in operation.

The extraction system must comply with EN 12779:2004.

Ensure that when the main motor is started, the extraction starts automatically too.

NOTE-INFORMATION:
connect the exhaust pipes to the suction system with hoses of proper diameter.

NOTE-INFORMATION:
we recommend that the suction sleeve is arranged out of the suction hood in order to avoid clogging caused by chips.

Connect the hose to suction hood (A fig. 4.5), diameter 120 mm and (B fig. 4.5), diameter 80 mm.
Clamp it with the proper metallic clip to ensure the contact between suction hood and hose.

The suction system shall ensure a flow equal to 1200 m^3/h at a flow speed at least of 20 m/s.

This value shall be checked before starting the working.
If further machines are connected to central suction system carry out a test when all suction systems are in operation.

The right operation of the suction system reduces the risks due to dust inhalation.

Other factors which reduce the dust emission in the working environnement.

- maintenance of tools, of the machine and of the suction system;
- proper use of protective devices against dust.

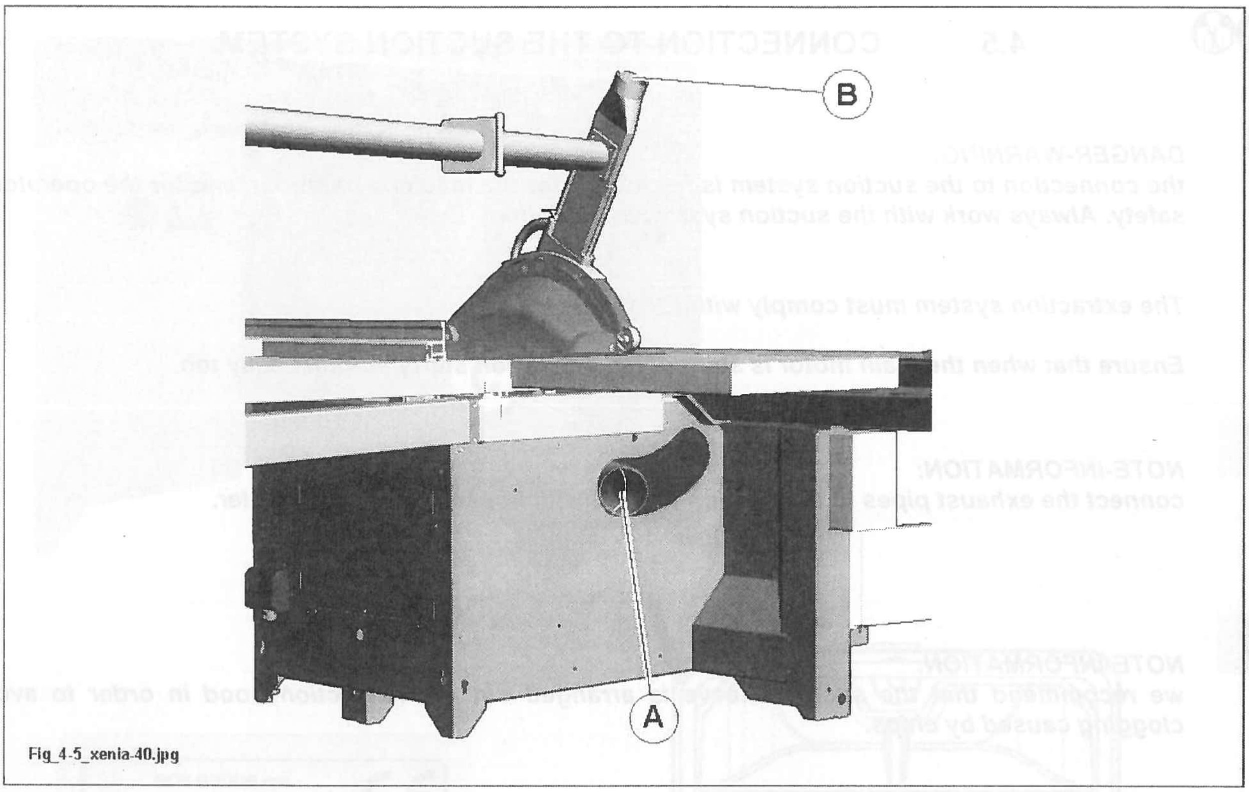

B
A
Fig_4-5_xenia-40.jpg

Fig. 4.5

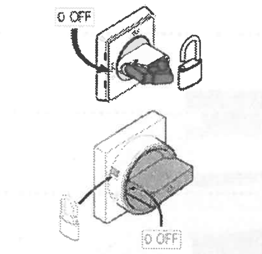
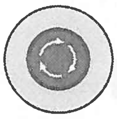
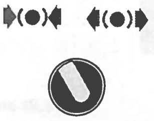
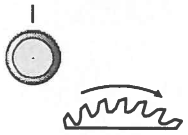
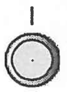
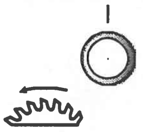
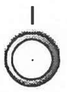
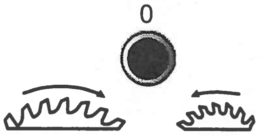
INDEX

5.1 Controls board 2
5.2 Emergency buttons 3
5.3 Access to the electric housing 3
5.4 General controls before machine starting 5
5.5 Machine start - stop 5
5.11 Auto-brake motor 7

5.1 CONTROLS BOARD

(=_ev_5-1_0.0)

The control board depends on the machine version:

Ref.	Image	Description / function	Use and/or explanation
1		Padlockable main switch on electric cubicle. Machine supply voltage switching on/off. Possible locking to "0" by padlock.	I ON = on 0 OFF = off
2		Emergency button. Motor supply voltage switching off with intervention of brakes when these are present.	Pressed: machine in emergency condition. Reset by turning the button to the arrow direction.
3		Selector for releasing/locking the saw motor brake.	▶(●)◀ = Motor brake locked: lamp off. ◀(●)▶ = Motor brake released: pilot lamp lit
4		Button to START the saw motor.	 To start the saw motor press button.
5		Button to START the scorer motor.	 To start the scorer motor press button.
6		Button to STOP the saw and the scorer motor.	Press pushbutton to stop saw and scorer.

5.2 EMERGENCY BUTTONS

(=_ev_5-2_0.0)

In case of danger if you press the emergency button, any function of the machine is locked.

Emergency buttons present on the machine are:

- emergency button (1 fig. 5.3) parallel fence side.
- Emergency button (1 fig. 5.3) on control board.

Periodically press the emergency buttons to check whether they are efficient.

DANGER-WARNING:
any anomalies found during the control of these devices, must be reported promptly to the manager, who will put the machine out of service and call the electrical, mechanical maintenance personnel or the SCM ***Support Service.***

5.3 ACCESS TO THE ELECTRIC HOUSING

(=_ev_5-3_0.0)

DANGER-WARNING:
only a skilled electrician may reach the electric housing.

Control board

Shut off the power.
Turn the main switch (A fig. 5.3) to 0 (OFF).
Remove the screws (V fig. 5.3) closing the door (P fig. 5.3).

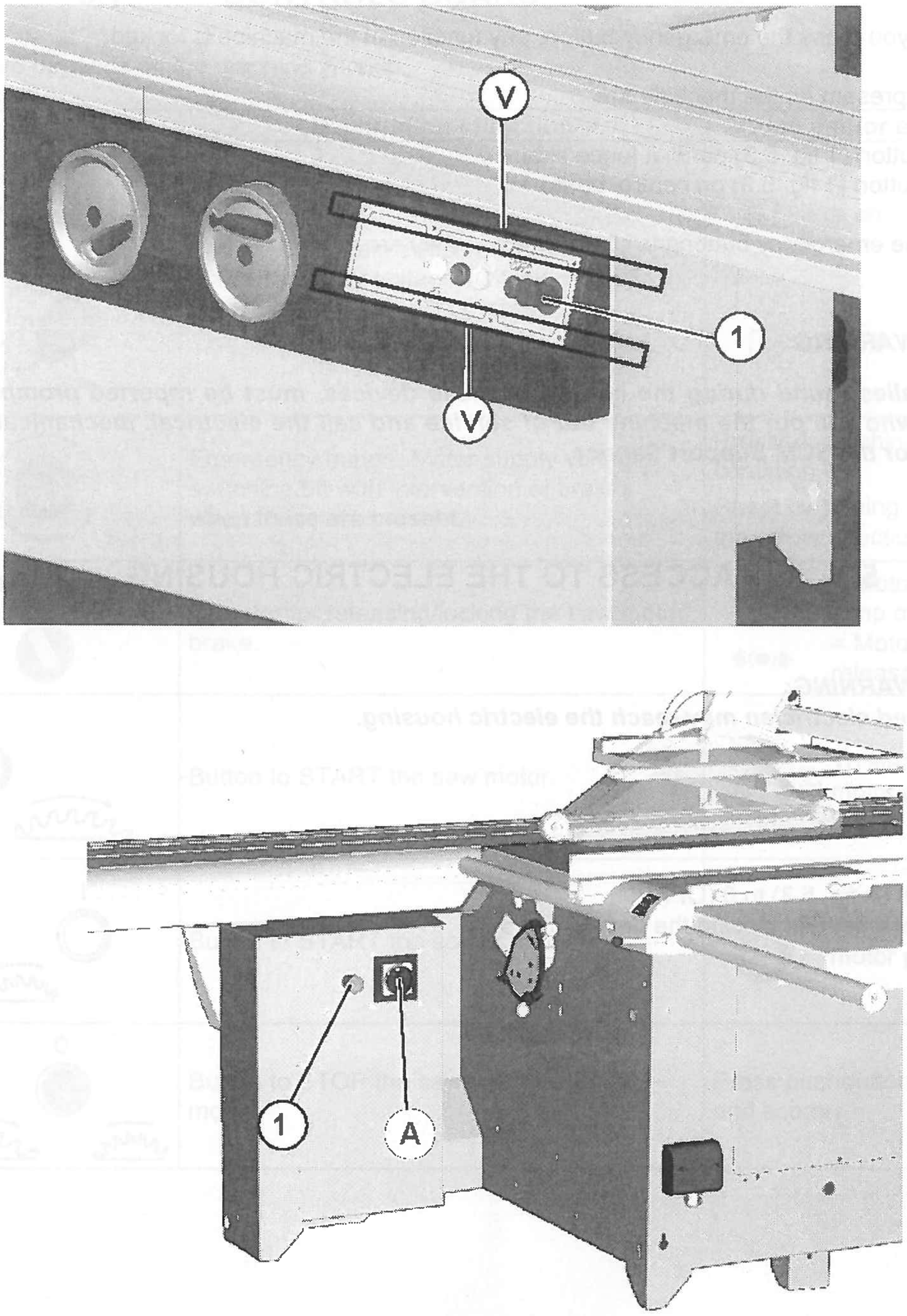


Fig_5-3_formula-S40.jpg

Fig. 5.3

5.4 GENERAL CONTROLS BEFORE MACHINE STARTING

(=_ev_5-4_0.0)

Make sure that:
- the guard of the saw unit is closed.
- The machine is connected to the suction system.
- The emergency buttons are in right position (if necessary release them).
- Switch (3 fig. 5.5) is turned to ▶(●)◀ (pilot lamp off).
- Main switch (1 fig. 5.5) is turned to I (ON).

DANGER-WARNING:

any anomalies found during the control of these devices, must be reported promptly to the manager, who will put the machine out of service and call the electrical, mechanical maintenance personnel or the SCM ***Support Service.***

NOTE-INFORMATION:
make sure that the speed indicated is proper for the tool fitted to the saw spindle.

FORBIDDEN:
do not modify or exclude any of the circuits or devices installed.

5.5 MACHINE START - STOP

(=_ev_5-5_0.0)

NOTE-INFORMATION:
carry out the checks of par. 5.4.

Machine Start procedure

1) To start the saw motor press button (4 fig. 5.5).
2) To start the scorer press button (5 fig. 5.5).

NOTE-INFORMATION:
the scorer motor may be started only after that the saw motor has reached the max. speed; pilot lamp of button (4 fig. 5.5) lit.

Machine Stop procedure

To stop the saw blade and scorer press button (4A fig. 5.5).

FORBIDDEN:
it is forbidden to stop the motor by turning selector (3 fig. 5.5) to ◀(●)▶.

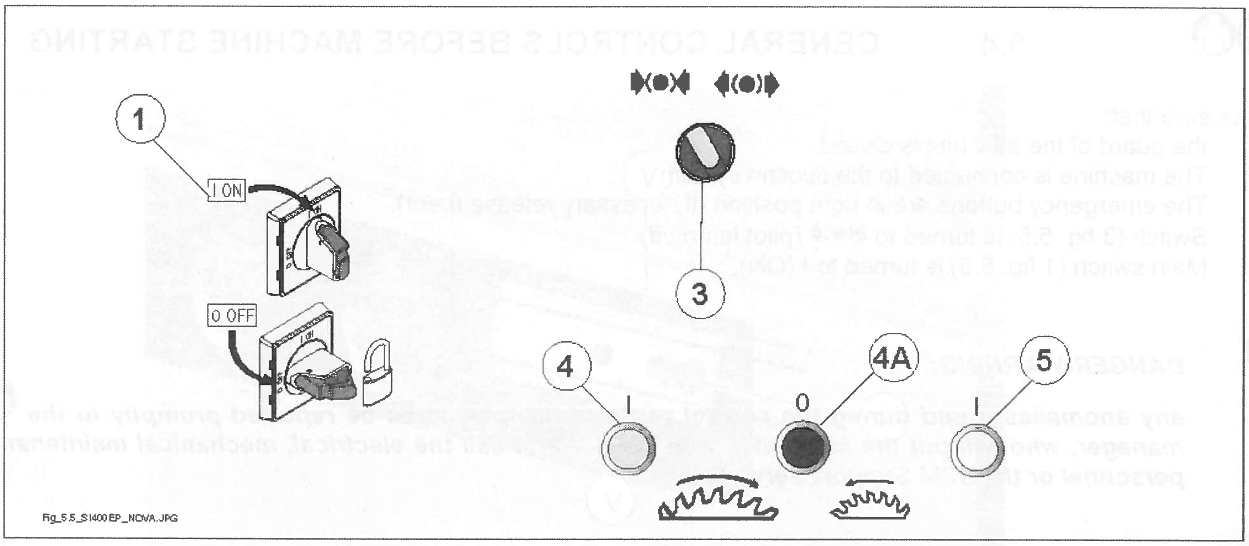

1
I ON
0 OFF
3
4
4A
5
I
0
I
Fig_5.5_S1400EP_NOVA.JPG

Fig. 5.5

5.11 AUTO-BRAKE MOTOR

(=_ev_5-11_0.0)

The spindle rotation occurs by means of autobrake motor.
Under normal working condition selector (3 fig. 5.11) is turned to ▶(●)◀ .
When you switch off the motor or you shut off the power, the motor automatically brakes and remains braked until the next spindle start.
In case of adjustment as cutter fitting etc. for which the spindle shall turn freely, turn selector (3 fig. 5.11) to ◀(●)▶ ; the pilot lamp lights up at the same time.

The motor may be started only when selector (3 fig. 5.11) is turned to ▶(●)◀ .

NOTE-INFORMATION:
the material used for auto-brake motors does not contain any cancerous components.

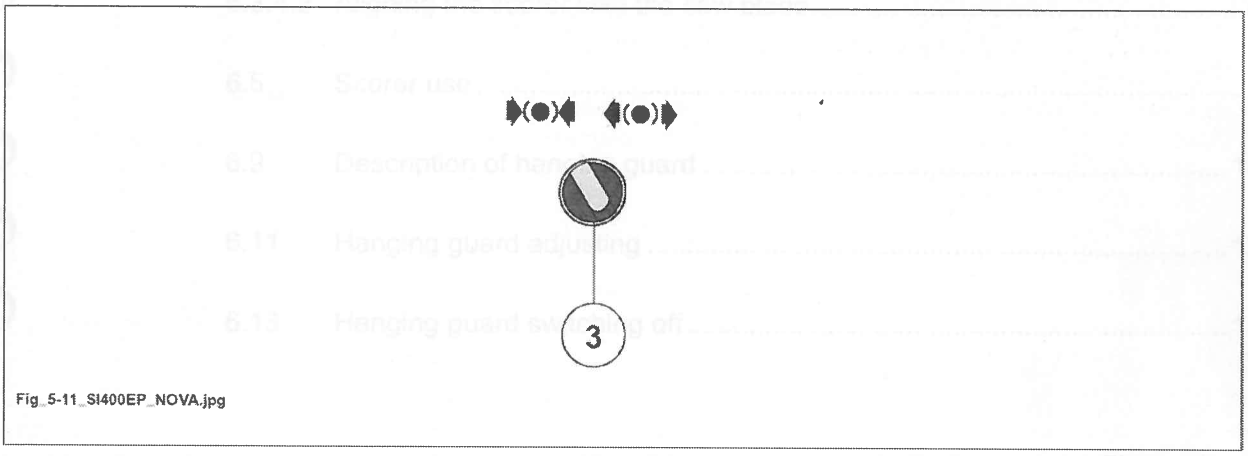


Fig. 5.11

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6.1 RIVING KNIFE ADJUSTING

(=_ev_6-1_0.0)

NOTE-INFORMATION:
the machine is always equipped with 2 riving knives.
One riving knife for Ø 300 or Ø 350 mm saw blade, the other one for Ø 400 mm saw blade.

DANGER-WARNING:
always fit the proper riving knife (supplied) according to the saw blade diameter.

1) Press the emergency button (E fig. 6.1).
2) WAIT UNTIL THE SAW BLADES ARE STILL.
3) Lift hooks (G fig. 6.1) to unlock and to open guard (P fig. 6.1).
4) Loosen nut (A fig. 6.1) with a wrench.
5) Fit the proper riving knife inserting it between the plates (B fig. 6.1).
6) Adjust the riving knife according to the saw blade diameter (gap L between saw blade and riving knife shall be 3 ÷ 4 mm).
7) Tighten nut (A fig. 6.1).
8) Position again the guard for saw blades (P fig. 6.1).
9) Release the emergency button (E fig. 6.1).

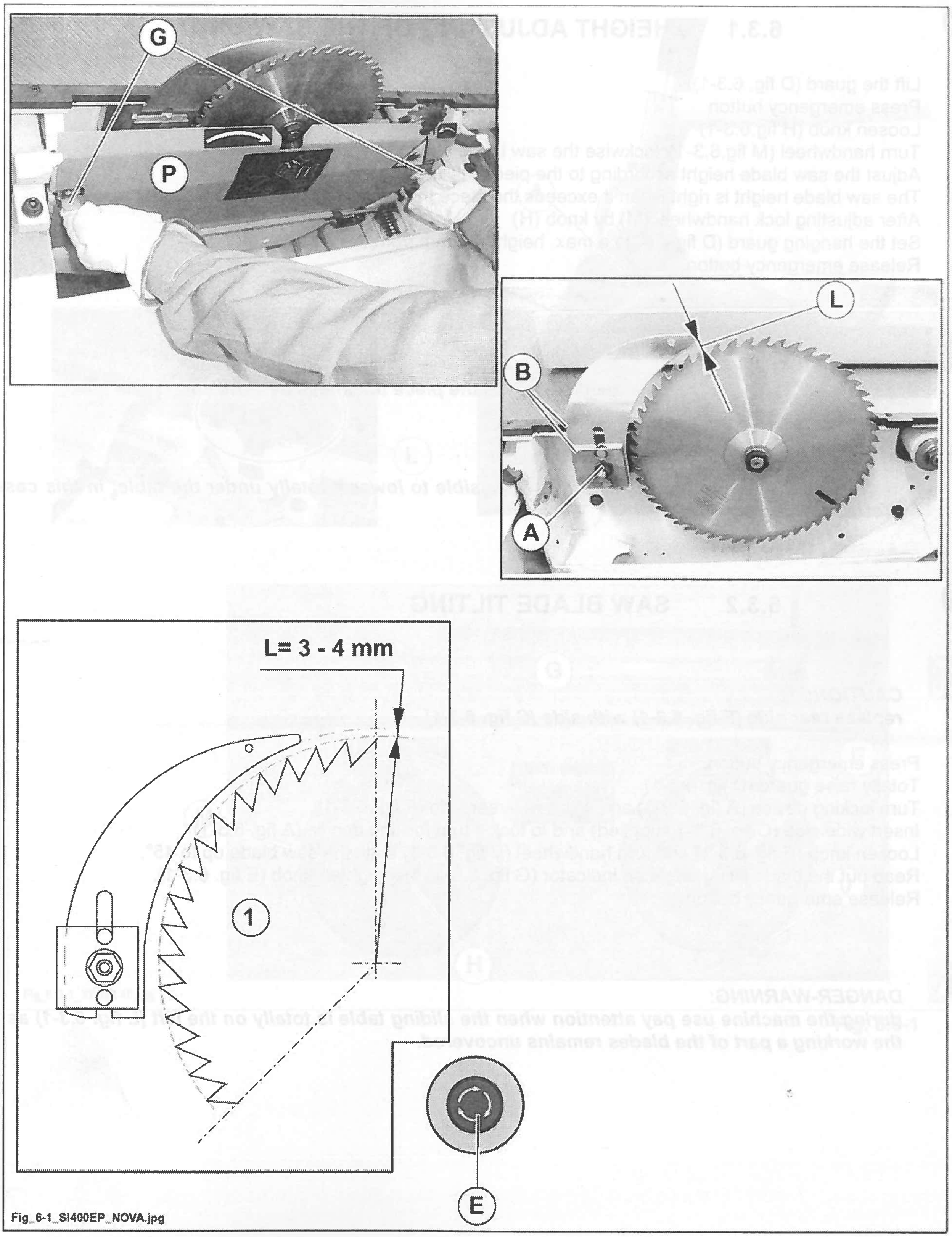
G
P
L
B
A
L= 3 - 4 mm
1
E
Fig_6-1_SI400EP_NOVA.jpg

Fig. 6.1

6.3.1 HEIGHT ADJUSTING OF THE SAW UNIT

(=_ev_6-3-1_0.0)

- Lift the guard (D fig. 6.3-1).
- Press emergency button
- Loosen knob (H fig.6.3-1)
- Turn handwheel (M fig.6.3-1)clockwise the saw blade rises.
- Adjust the saw blade height according to the piece thickness.
  The saw blade height is right when it exceeds the piece thickness 1-1.5 cm.
- After adjusting lock handwheel (M) by knob (H)
- Set the hanging guard (D fig.4.8) to a max. height 4-5 mm from the workpiece.
- Release emergency button.

NOTE-INFORMATION:
the saw blade height is right when it exceeds the piece thickness by 1-1.5 cm.

DANGER-WARNING:
in case of Ø 400 mm saw blade it is not possible to lower it totally under the table; in this case it protrudes 20 mm.

6.3.2 SAW BLADE TILTING

(=_ev_6-3-2_0.0)

CAUTION:
replace rear side (F fig. 6.3-1) with side (C fig. 6.3-1).

- Press emergency button.
- Totally raise guard (D fig. 6.3-1).
- Turn locking device (A fig. 6.3-1) and withdraw rear side (F fig. 6.3-1).
- Insert wide side (C fig. 6.3-1 supplied) and to lock it turn locking decice (A fig. 6.3-1).
- Loosen knob (E fig. 6.3-1) and turn handwheel (V fig. 6.3-1) to tilt the saw blade up to 45°.
- Read out the blade tilting angle on indicator (G fig. 6.3-1) then tighten knob (E fig. 6.3-1).
- Release emergency button.

DANGER-WARNING:
during the machine use pay attention when the sliding table is totally on the left (L fig. 6.3-1) as for the working a part of the blades remains uncovered.

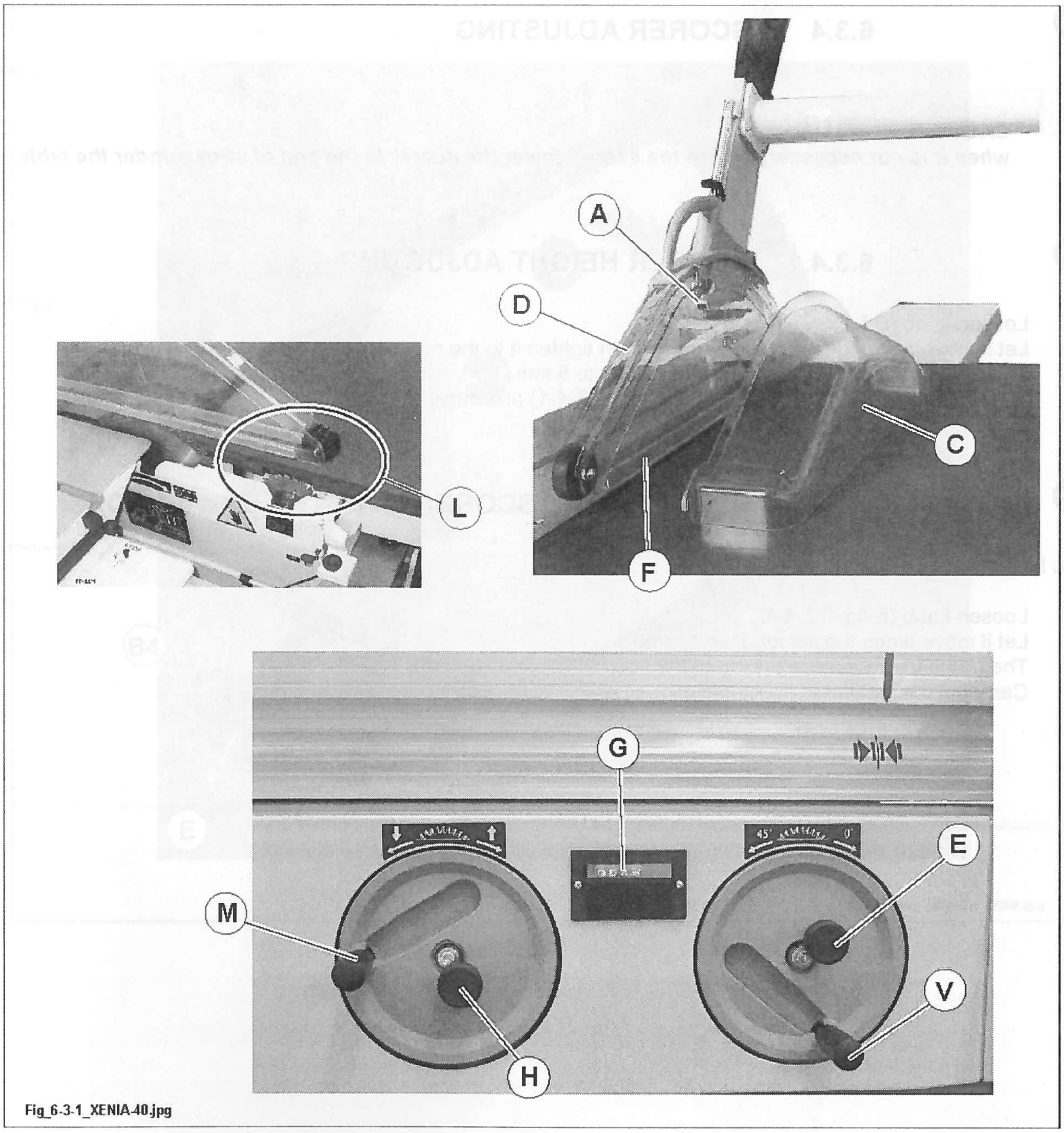
A
D
L
C
F
G
45°
0°
E
M
V
H

Fig_6-3-1_XENIA-40.jpg

Fig. 6.3-1

6.3.4 SCORER ADJUSTING

(=_ev_6-3-4_0.0)

CAUTION:
when it is not necessary to use the scorer, lower the scorer to the end of stroke under the table.

6.3.4.1 SCORER HEIGHT ADJUSTING

(=-gu_6-3-4-1_0.0)

- Loosen knob (D fig. 6.3-4-1).
- Let it move along the graduated sector, then tighten it to the measure desired.
- The projection adjusting range varies from 0 to 5 mm.
- To switch off the scorer loosen knob (D fig. 6.3-4-1) and move the scorer totally downwards.

6.3.4.2 ALIGNING THE SCORER WITH THE SAW BLADE

(=-gu_6-3-4-2_0.0)

You have to carry out some cutting tests.

- Loosen knob (E fig. 6.3-4-1).
- Let it move along the sector, then tighten it.

The range for traverse adjusting of the scorer is approx. 3.5 mm.

- Carry out the test cut to check the alignement.

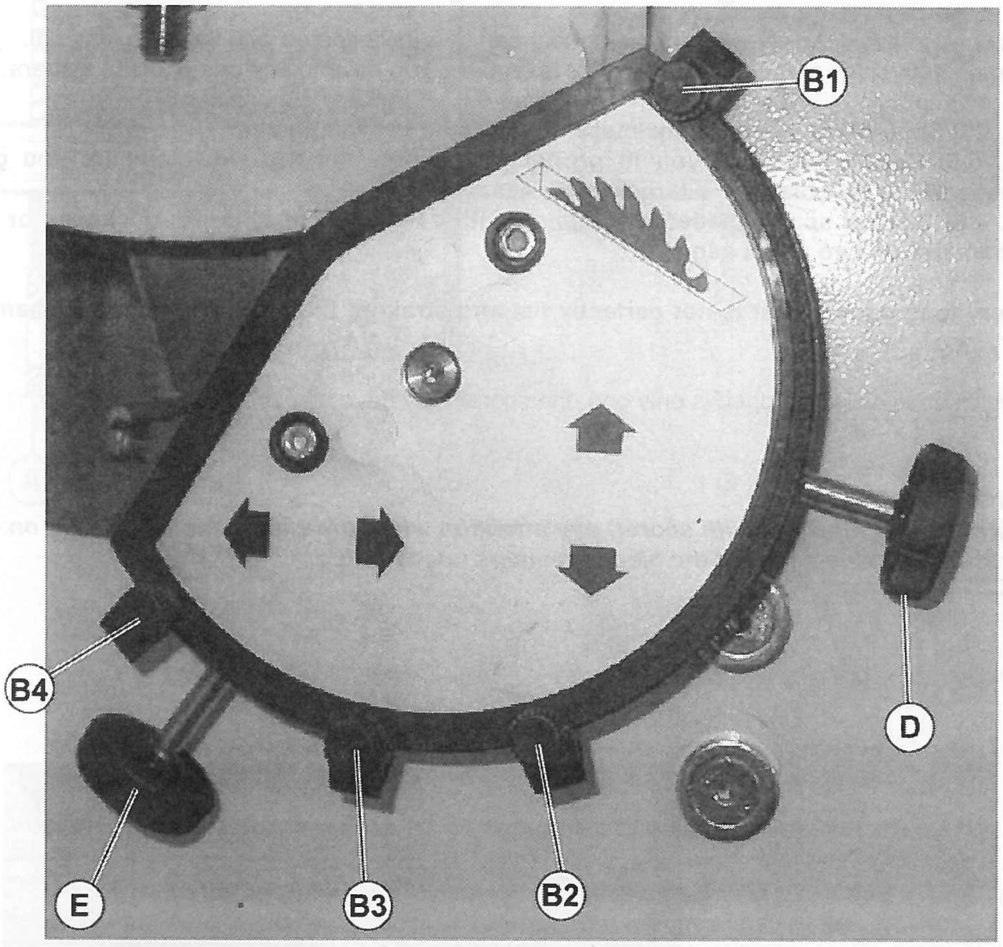

Fig 6-3-4-1 SI400EP NOVA.jpg

6.5 SCORER USE

(=_gu_6-5_0.0)

The scorer is used to avoid the chipping on the bottom part of panels coated with finishing material.
If the finishing on both sides of the panel cut to size is required you have to use one of these scorers.

1) **(A fig. 6.5) Scorer with blade of thickness equal to the saw blade one.**
2) **(B fig. 6.5) Double cutter: if you fit proper shims between the two elements you get the same thickness of the saw blade or a larger thickness.**
3) **(C fig. 6.5) Conical scorer blade: for aligning with saw blade of different thickness or for obtaining two chamfers on two panel edges.**

In case of very long panels, that is not perfectly flat and straight, the engraving and the chamfers may not be uniform.

If the edge which shall not be chipped is only one, the scorer may have any shape and dimension.

DANGER-WARNING:
during the machine use with scorer, pay attention when the sliding table is totally on the left (L fig. 6.5) as for working a part of the blades remains uncovered.

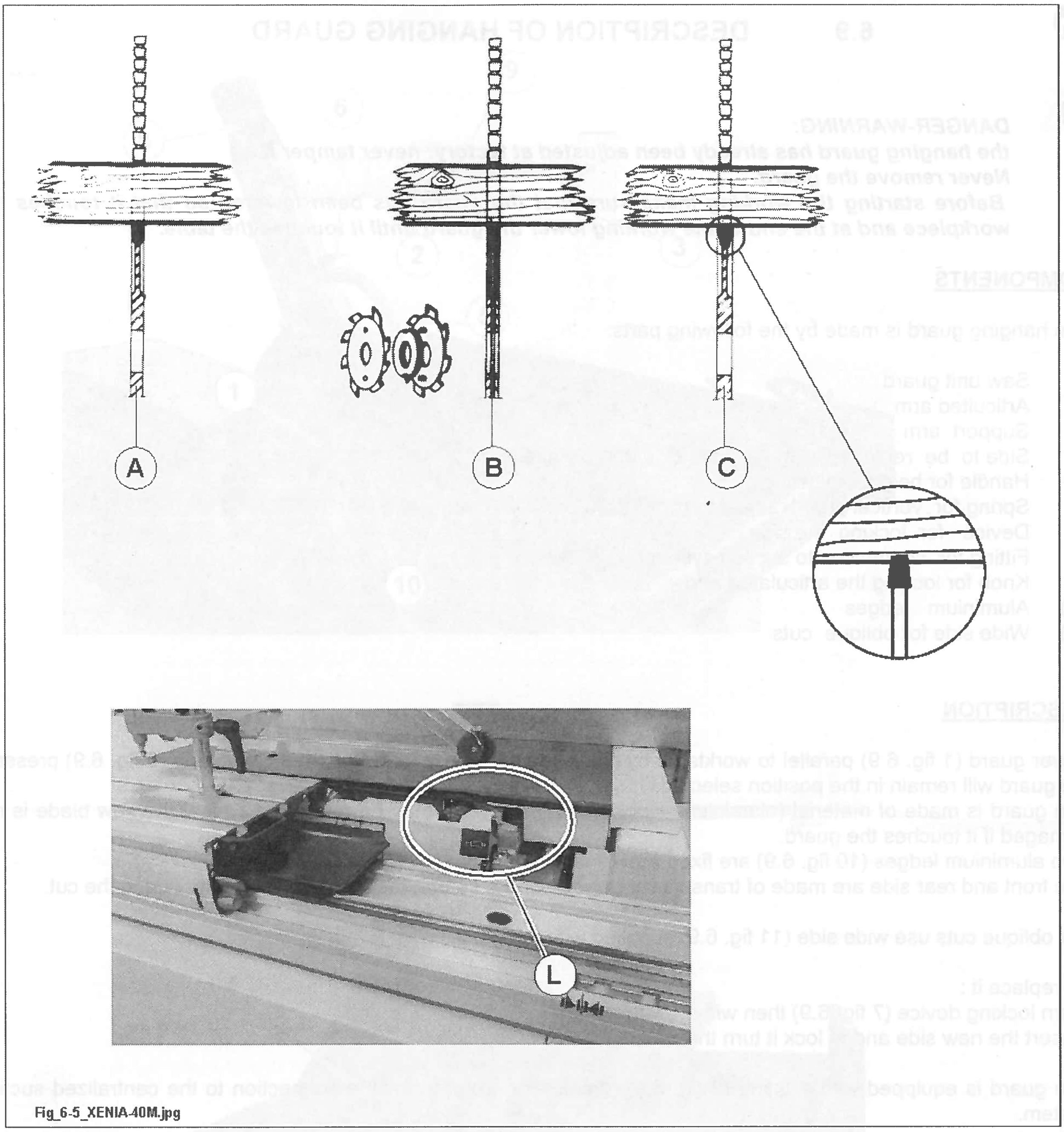

Fig_6-5_XENIA-40M.jpg

Fig. 6.5

6.9 DESCRIPTION OF HANGING GUARD

DANGER-WARNING:
the hanging guard has already been adjusted at factory: never tamper it.
Never remove the guard.
Before starting the working make sure that the guard has been lowered so that it touches the workpiece and at the end of the working lower the guard until it touches the table.

COMPONENTS

The hanging guard is made by the following parts:

1) Saw unit guard
2) Articulted arm
3) Support arm
4) Side to be replaced with the wide side for oblique cuts
5) Handle for height adjusting
6) Spring for vertical guard adjustment
7) Device for locking the side
8) Fitting for connection to suction system
9) Knob for locking the articulated arm
10) Aluminium ledges
11) Wide side for oblique cuts

DESCRIPTION

Lower guard (1 fig. 6.9) parallel to worktable by means of handle (5 fig. 6.9) by holding spring (6 fig. 6.9) pressed: the guard will remain in the position selected.
The guard is made of material (aluminium + polycarbonate) which may be machined so that the saw blade is not damaged if it touches the guard.
Two aluminium ledges (10 fig. 6.9) are fixed down inside the guard to protect the sides.
The front and rear side are made of transparent polycarbonate so that the saw blade is visble during the cut.

For oblique cuts use wide side (11 fig. 6.9) supplied with the machine.

To replace it :
- turn locking device (7 fig. 6.9) then withdraw the side.
- insert the new side and to lock it turn the locking device (7 fig. 6.9).

The guard is equipped with a fitting (8 fig. 6.9) (diameter = 80 mm) for the connection to the centralized suction system.

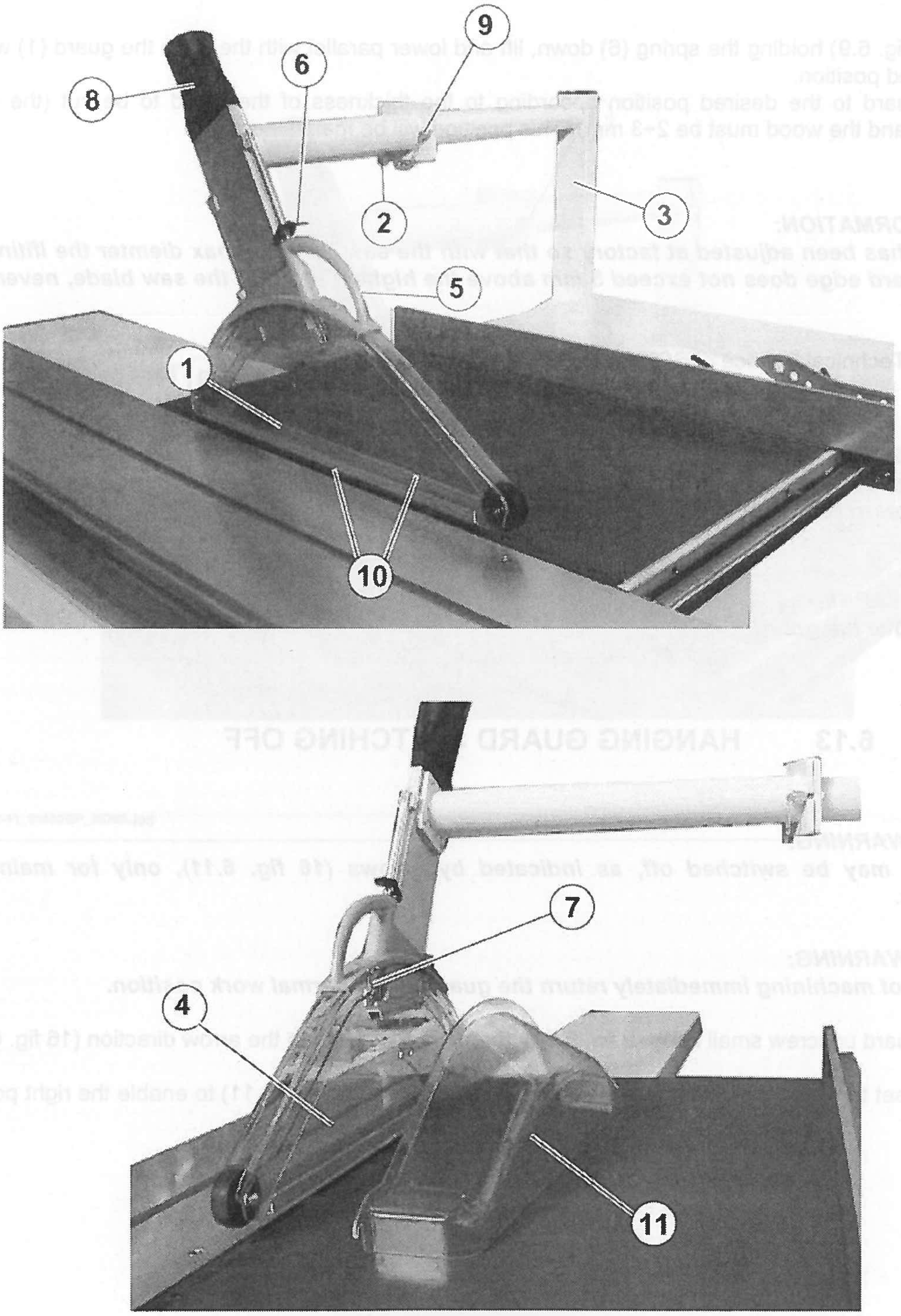

Fig_6-9_SI400EP_NOVA.jpg

Fig. 6.9

6.11 HANGING GUARD ADJUSTING

(=_ev_6-11_0.0)

With the handle (5 fig. 6.9) holding the spring (6) down, lift and lower parallel with the table the guard (1) which will maintain the selected position.
Lift or lower the guard to the desired position according to the thickness of the wood to be cut (the distance between the guard and the wood must be 2÷3 mm). This position will be maintained.

NOTE-INFORMATION:
the guard has been adjusted at factory so that with the saw blade of max diemter the lfiting of the bottom guard edge does not exceed 5 mm above the highest tooth of the saw blade, never tamper it.

Otherwise apply to Technical Service of SCM dealer.

NOTE-INFORMATION:
we recommend to keep the guard always clean and to periodically ckeck its conditions.
Keep the guard resting on the table, when the machine is off.

DANGER-WARNING:
never remove the guard.

6.13 HANGING GUARD SWITCHING OFF

(=_ev_6-13_0.0)

DANGER-WARNING:
the guard may be switched off, as indicated by arrows (16 fig. 6.11), only for maintenance operations.

DANGER-WARNING:
at the end of machining immediately return the guard to the normal work position.

To switch off the guard unscrew small knob (9 fig. 6.11) then turn the guard to the arrow direction (16 fig. 6.11).

When the guard is set to working position again, screw down small knob (9 fig. 6.11) to enable the right position to the saw blades.

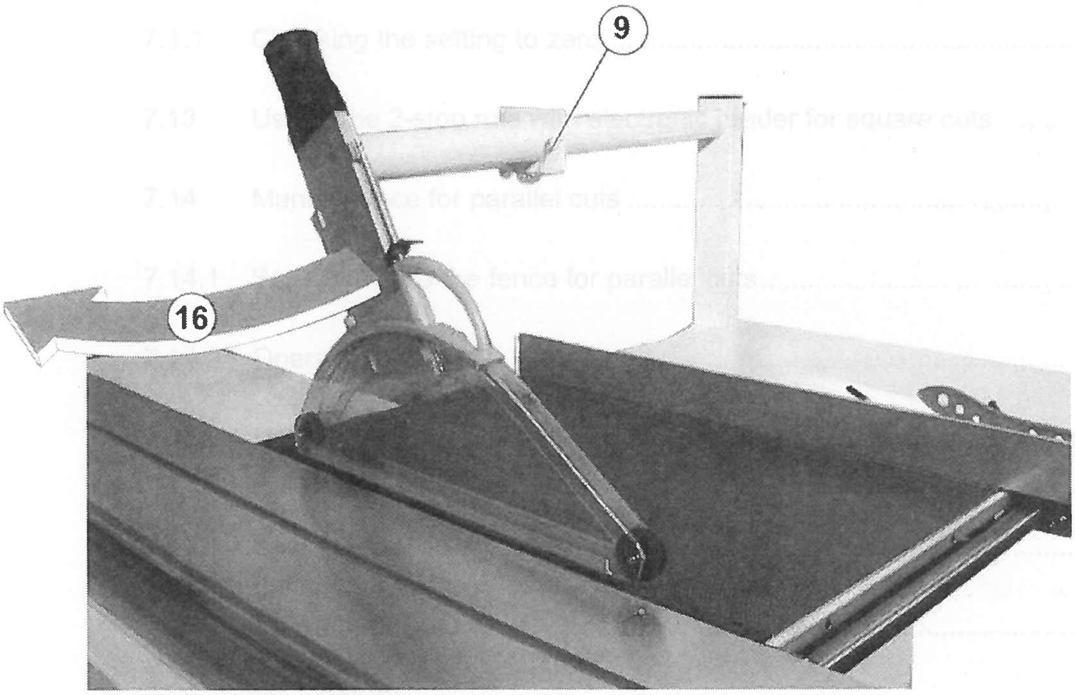

Fig_6-11_SI400EP_NOVA.jpg

Fig. 6.11

6.11 HANGING GUARD ADJUSTING

[illegible] knob [illegible] fig. [illegible] holding the spring [illegible] and lower parallel with the table [illegible] guard [illegible] which will maintain it a selected position.
Lift or lower the guard to the desired position according to the thickness of the wood to be cut (the distance between the guard and the wood must be 2~3 mm). The position will be maintained.

NOTE-INFORMATION.
the guard has been adjusted at factory so that with the [illegible] of max diameter the lifting of the bottom guard edge does not exceed 5 mm above the highest tooth of the saw blade, never tamper it.

Otherwise apply to *Technical Service of SCM dealer.*

NOTE-INFORMATION.
[illegible] ions.
[illegible]

DANGER-[illegible]
never remo[illegible]

6.13 HANGING GUARD SWITCHING OFF

DANGER-WARNING.
the guard may be switched off, as indicated by arrows (16 fig. 6.11), only for maintenance operations.

DANGER-WARNING.
at the end of machining immediately return the guard to the normal work position.

To switch off the guard unscrew small knob (9 fig. 6.11) then turn the guard to the arrow direction (16 fig. 6.11).

When the guard is set to working position again, screw down small knob (9 fig. 6.11) to enable the right position to the saw blades.

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(=_st-7c)

7.1 SETTING TO ZERO THE REST RULE

(=_ev_7-1_0.0)

1) With motors off lift the saw guard (saw blade at 90°).
2) Lock a stop (es. A fig. 7.1) in order to read a measure (i.e 150 mm) on millimeter rule (F fig. 7.1) in position corresponding to internal edge of the stop (S fig. 7.1) (turned to the blades).
3) Measure the distance between saw blade (L fig. 7.1) and stop (A fig. 7.1).
4) Move the rule so that the distance between saw blade and stop coincides with the value you have read on the millimeter rule.
5) After aligning the rule, raise and turn over it on the frame.
6) Tighten grub screws (O fig.7.1) of sliding pivots (P fig.7.1) arranged below the rule.
7) Set stop (M fig.7.1) against front pivot (P), then tighten grub screw (Q fig.7.1). This stop srves for aligning the rule if necessary.
8) Fit the rule to the frame and lock it by screwing down grub screws (N fig.7.1) in the button part of the frame
9) Switch on the machine (see CHAP 5) and by moving the sliding table trim the wood end (K fig.7.1 which we name chipbreaker).

7.1.1 CHECKING THE SETTING TO ZERO

(=_ev_7-1-1_0.0)

Lower the guard.

Trim a panel on 2 sides in order that they are perpendicular each to other.

Lock stop (A fig. 7.1) on the rule at a given measure so that the panel may be cut.

Rest the panel edge already trimmed against rule (G fig. 7.1) and the other trimmed edge against stop (A fig. 7.1).

After cutting, measure the cutting width.

When corrections are required, you have to set the millimeter rules again as already explained.

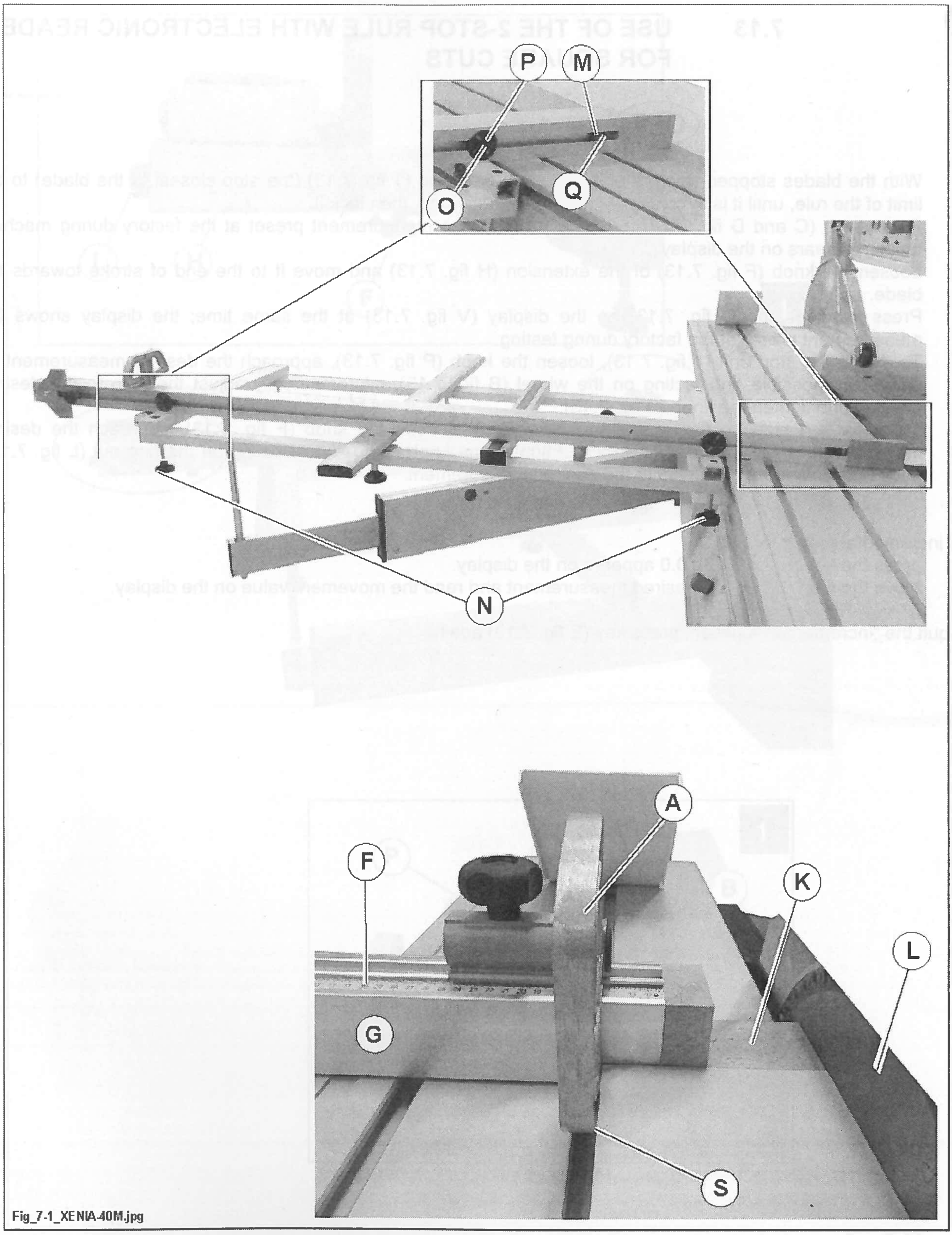

P
M
Q
O
N
A
F
K
L
G
S
Fig_7-1_XENIA-40M.jpg

Fig. 7.1

7.13 USE OF THE 2-STOP RULE WITH ELECTRONIC READER FOR SQUARE CUTS

(=_riga_2batt_let_el)

OPT

1) With the blades stopped (motors off), move the first stop (1 fig. 7.13) (the stop closest to the blade) to the limit of the rule, until it is in contact with the reference stop, then lock it.
2) Press keys (C and D fig. 7.13) at the same time; the measurement preset at the factory during machine testing appears on the display.
3) Loosen the knob (F fig. 7.13) of the extension (H fig. 7.13) and move it to the end of stroke towards the blade.
4) Press keys (C and D fig. 7.13) on the display (V fig. 7.13) at the same time; the display shows the measurement preset at the factory during testing.
5) To adjust the stop unit (1 fig. 7.13), loosen the knob (P fig. 7.13), approach the desired measurement as closely as possible and, acting on the wheel (B fig. 7.13), micrometrically adjust the stop to the desired position and tighten the knob (P fig. 7.13).
6) To adjust the stop on the extension (H fig. 7.13), loosen the knob (F fig. 7.13), approach the desired measurement as closely as possible and tighten the knob (F fig. 7.13); acting on the ring nut (L fig. 7.13), micrometrically adjust the stop to the desired measurement.

For incremental movements:

- press the key (E fig. 7.13), 0.0 appears on the display.
- Move the stop unit by the desired measurement and read the movement value on the display.

To quit the "incremental" function, press key (E fig. 7.13) again.

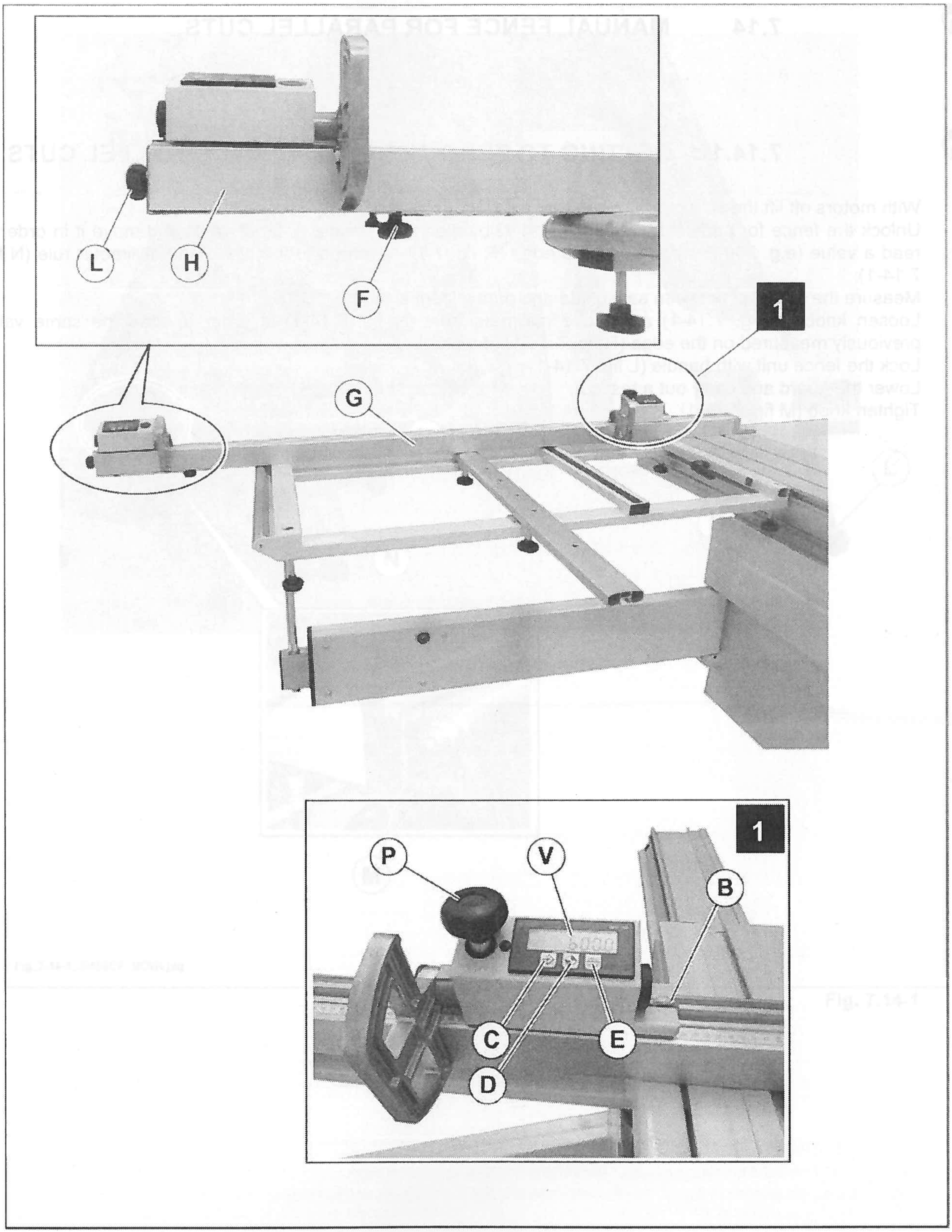


Fig. 7.13

7.14 MANUAL FENCE FOR PARALLEL CUTS

(=_gu_7-14_0.0)

7.14.1 SETTING TO ZERO THE FENCE FOR PARALLEL CUTS

(=_gu_7-14-1_0.0)

1) With motors off lift the saw guard.
2) Unlock the fence for parallel cuts (D fig. 7.14-1) by means of handle (L fig. 7.14-1) and move it in order to read a value (e.g. 200 mm) between the edge (R fig. 7.14-1) turned to the blade and millimeter rule (N fig. 7.14-1).
3) Measure the distance between saw blade and parallel fence.
4) Loosen knob (M fig. 7.14-1) and move millimeter rule (N fig. 7.14-1) in order to read the same value previously measured on the edge (R fig. 7.14-1) of fence.
5) Lock the fence unit with handle (L fig. 7.14-1)
   Lower the guard and carry out a test cut.
6) Tighten knob (M fig. 7.14-1).

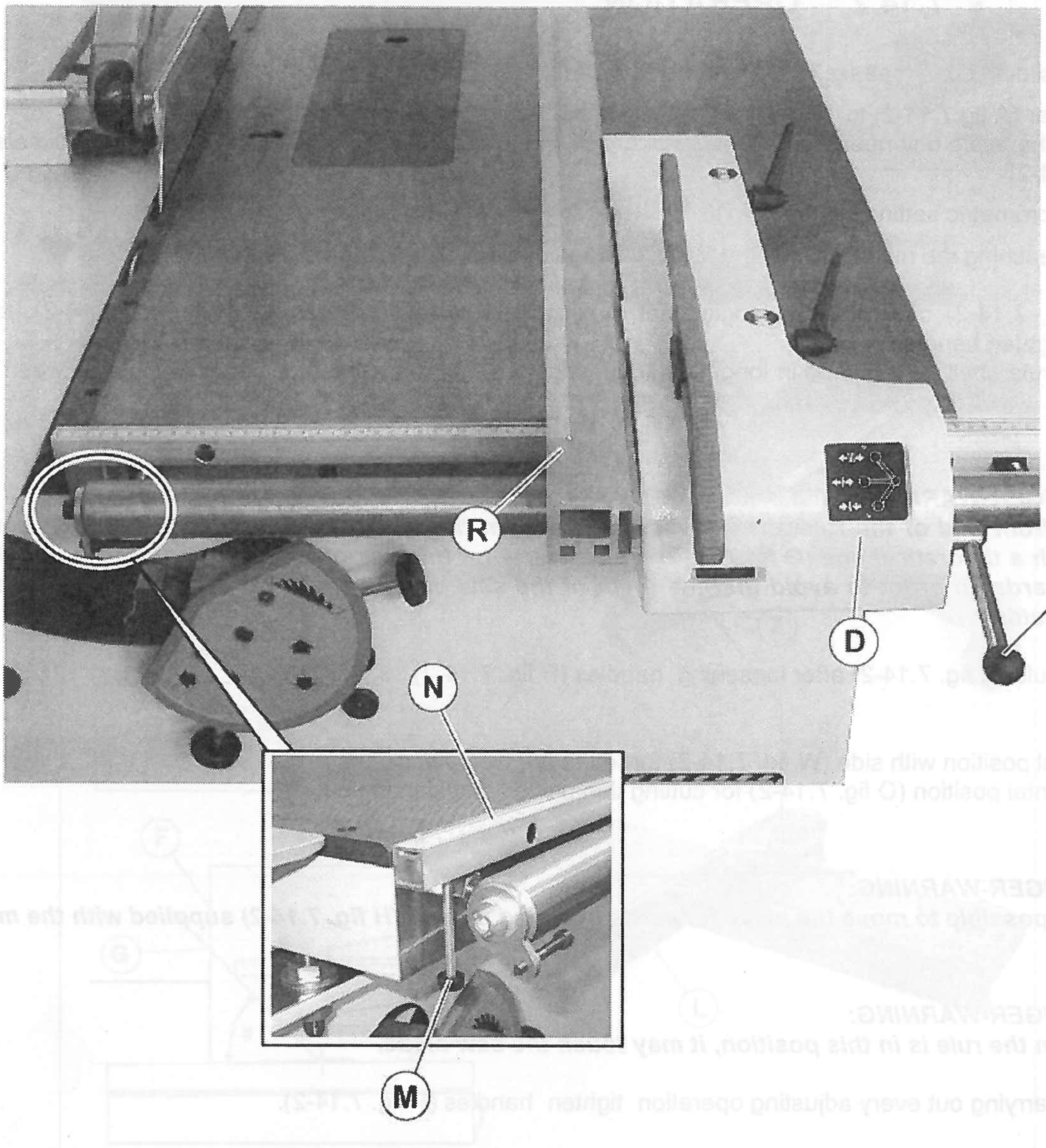


Fig_7-14-1_SI400EP_NOVA.jpg

Fig. 7.14-1

7.14.2 OPERATION

(=_gu_7-14-2_0.0)

- Move sliding table (see fig.7.14-2) and lock lever (M fig.7.14-2)
- Lift lever (A fig.7.14-2) to ◀I▶ for unlocking the fence unit.
- Move the fence unit near the desired measure as much as possible (read out the value on millimeter rule N fig.7.14-2)
- For micrometric setting lift lever (A) to ◀III▶ then e turn knob (C fig.7.14-2).
- After reaching the measure lock the fence unit again by lowering lever (A fig.7.14-2) to ▶I◀.

Rule (R fig. 7.14-2) can move in longitudinal direction after unlocking handles (P fig. 7.14-2); fter every adjustment tighten handles.
The parallel rule shall be adjusted in longitudinal direction, so that the workpiece can not lock between rule and riving knife.

DANGER-WARNING:
the front end of the rule shall never protude from the table end on side (F fig.7.14-2) but it shall reach a theoretical line (G fig.7.14-2) which starts on the axis of the saw blade and has a 45° slope forwards, in order to avoid that the teeth of the saw blade grip the piece and throw it against the operator.

Positions of rule (R fig. 7.14-2) after loosening handles (P fig. 7.14-2).

1) Vertical position with side (W fig. 7.14-2) turned to the workpiece.
2) Horizontal position (O fig. 7.14-2) for cutting thin pieces and slanting cuts.

DANGER-WARNING:
it is possible to move the piece forwards by using pusher (H fig. 7.14-2) supplied with the machine.

DANGER-WARNING:
when the rule is in this position, it may touch the saw blade.

3) After carrying out every adjusting operation tighten handles (P fig. 7.14-2).

DANGER-WARNING:
before starting machining, make sure that the guard is resting on the workpiece.

NOTE-INFORMATION:
for carrying out cuts exceeding the max. "opening" measure of the fence unit, switch off the fence unit from the worktable as follows:

1) ***Loosen lever (A fig. 7.14-2).***
2) ***Set the fence unit to max. distance from the saw blade.***
3) ***Loosen lever (P fig. 7.14-2), set rule (R fig.7.14-2) as indicated in fig. 7.14-2.***
4) ***Tighten lever (P).***
5) ***Ligtly turn fence unit around bar (L fig. 7.14-2) and surpass pin (Z fig. 7.14-2) with support (S) so that it is against ring (B).***
6) ***Completely turn the fence unit around the bar (L fig. 7.14-2) to switch it off.***

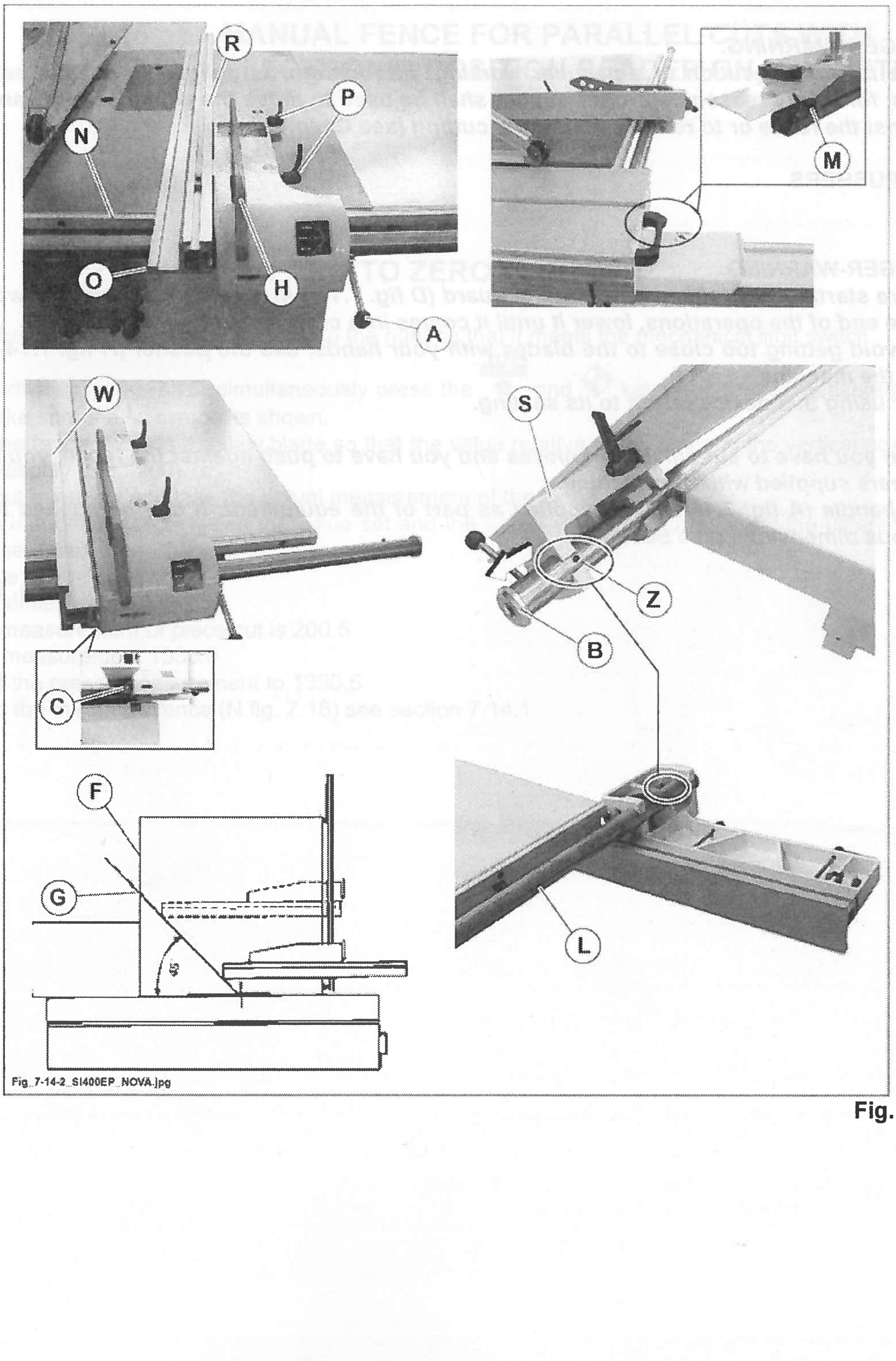

R
P
N
O
H
A
M
W
S
Z
B
C
F
G
45
L
Fig_7-14-2_SI400EP_NOVA.jpg

Fig. 7.14-2

DANGER-WARNING:
when for the execution of a peculiar working, the operator is obliged to put his hands near the tools, for safety reasons a proper pusher shall be used to move the workpiece forwards, to push it against the fence or to remove it after the cutting (see Chap.15).

USING THE PUSHERS

DANGER-WARNING:
before starting to work, ensure that the guard (D fig. 7.14-2A) is resting against the workpiece and, at the end of the operations, lower it until it comes into contact with the table.
To avoid getting too close to the blades with your hands, use the pusher (H fig. 7.14-2A) supplied with the machine.
After using this device return to its seating.

When you have to cut small workpieces and you have to push against the fence, you must use the pushers supplied with the machine.
The handle (A fig. 7.14-2A) is supplied as part of the equipment; it can be applied to pushers of various dimensions (see Section15).

Fig. 7.14-2A

7.15 MANUAL FENCE FOR PARALLEL CUTS WITH ELECTRONIC POSITION READER ON MAGNETIC TAPE

(=_hd_7 15_0.0)

OPT

7.15.1 SETTING TO ZERO

(=_hd_7 15.1_0.0)

1) Move the fence for parallel cuts totally to the right so that it meets the mechanical limit switch.
2) On the display (V fig. 7.15) simultaneously press the ⇕ and ⌖ keys (the preset measurement appears) and make sure the └ symbol is shown.
3) Move the fence towards the saw blade so that the value relative to the fence in the vertical position appears on the display (e.g.: 200).
4) Carry out a test cut and take the actual measurement of the piece obtained.
5) If there is a difference between the value set and the actual value, add or subtract the difference to or from the preset value (see Chapter 13).
   Example:
   Measurement set at 200
   Actual measurement of piece cut is 200.5
   Preset measurement 1330.0
   Correct the preset measurement to 1330.5
6) To zero the millimetre fence (N fig. 7.15) see section 7.14.1.

7.15.2 OPERATION

(=_hd_7 15.2_0.0)

- Position the sliding table as in fig. 7.15 and lock with lever (M fig.7.15).
- Lift lever (A fig. 7.15) to ◀|▶ to unlock the fence unit.
- Move the fence unit as near as possible to the desired measurement (read the value on the display V and on the millimetre fence N fig.7. 15)
- For micrometric setting lift lever (A) to ◀|||▶ and turn knob (C fig. 7.15).
- After reaching the measurement lock the fence unit again by lowering lever (A fig. 7.15) to ▶|◀.

For incremental shiftment:

- press key abs/incr, 0.0 appears on the display.
- Move the stop unit by the desired measure, read out the shitment measure on the display.

To quit the "incremental" function press key abs/incr.
Rule (R fig. 7.15) can move in longitudinal direction after unlocking handles (P fig. 7.15); after every adjustment tighten handles.
The parallel rule shall be adjusted in longitudinal direction, so that the workpiece can not lock between rule and riving knife.

DANGER-WARNING:
the front end of the rule shall never protude from the table end on side (F fig.7.15) but it shall reach a theoretical line (G fig.7.15) which starts on the axis of the saw blade and has a 45° slope forwards, in order to avoid that the teeth of the saw blade grip the piece and throw it against the operator.

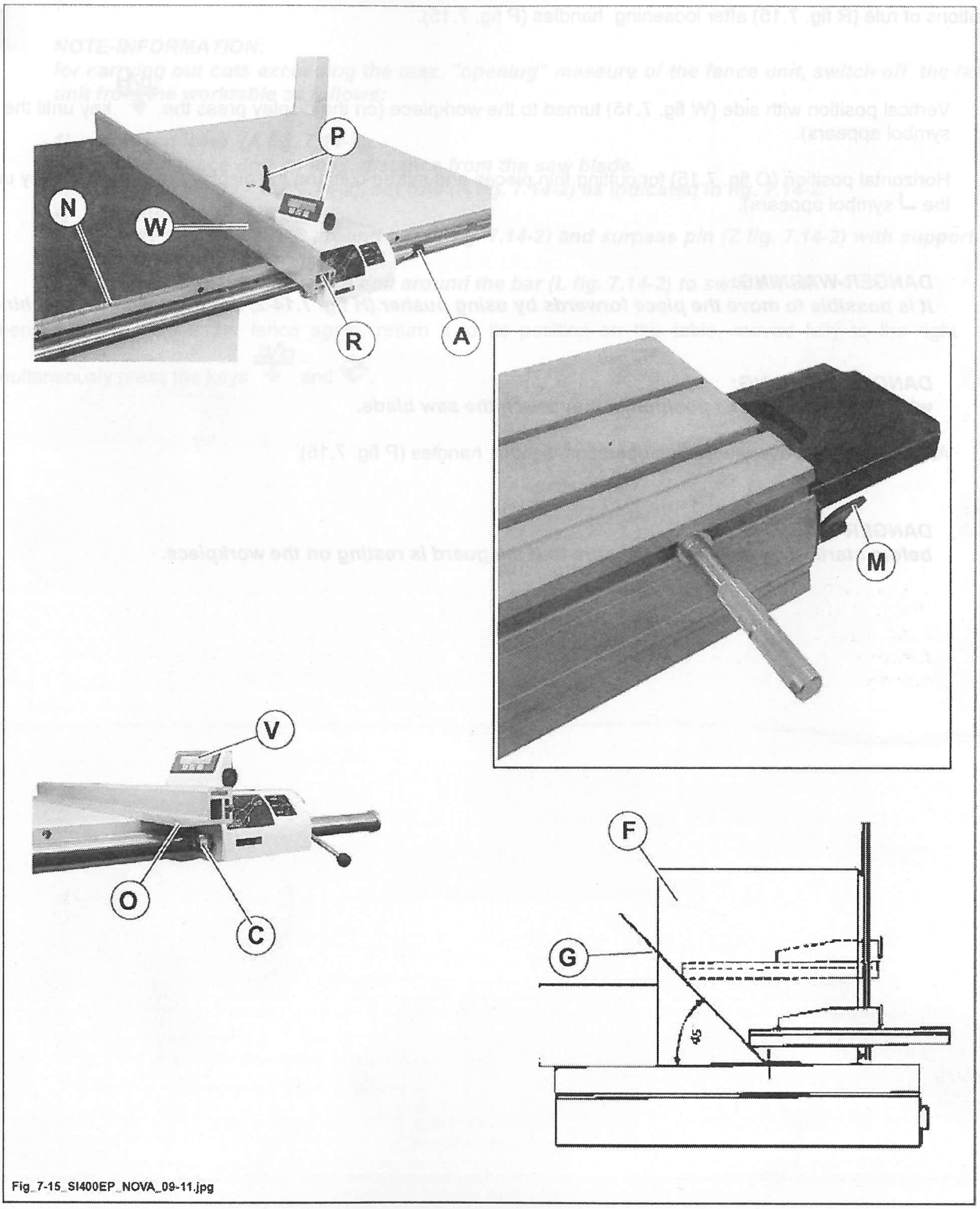

P
N
W
R
A
M
V
O
C
F
G
45
Fig_7-15_SI400EP_NOVA_09-11.jpg

Fig. 7.15

Positions of rule (R fig. 7.15) after loosening handles (P fig. 7.15).

1) Vertical position with side (W fig. 7.15) turned to the workpiece (on the display press the ⇕ key until the └ symbol appears).

2) Horizontal position (O fig. 7.15) for cutting thin pieces and mitred cuts (on the display press the ⇕ key until the ┘ symbol appears).

DANGER-WARNING:
it is possible to move the piece forwards by using pusher (H fig. 7.14-2) supplied with the machine.

DANGER-WARNING:
when the rule is in this position, it may touch the saw blade.

3) After carrying out every adjusting operation tighten handles (P fig. 7.15).

DANGER-WARNING:
before starting machining, make sure that the guard is resting on the workpiece.

NOTE-INFORMATION:
for carrying out cuts exceeding the max. "opening" measure of the fence unit, switch off the fence unit from the worktable as follows:

1) Loosen lever (A fig. 7.14-2).
2) Set the fence unit to max. distance from the saw blade.
3) Loosen lever (P fig. 7.14-2), set rule (R fig. 7.14-2) as indicated in fig. 7.14-2.
4) Tighten lever (P).
5) Ligtly turn fence unit around bar (L fig. 7.14-2) and surpass pin (Z fig. 7.14-2) with support (S) so that it is against ring (B).
6) Completely turn the fence unit around the bar (L fig. 7.14-2) to switch it off.

When you want to use the fence again, return it to its position on the table, moved fully to the right, and simultaneously press the keys ⇕ and ⌖.

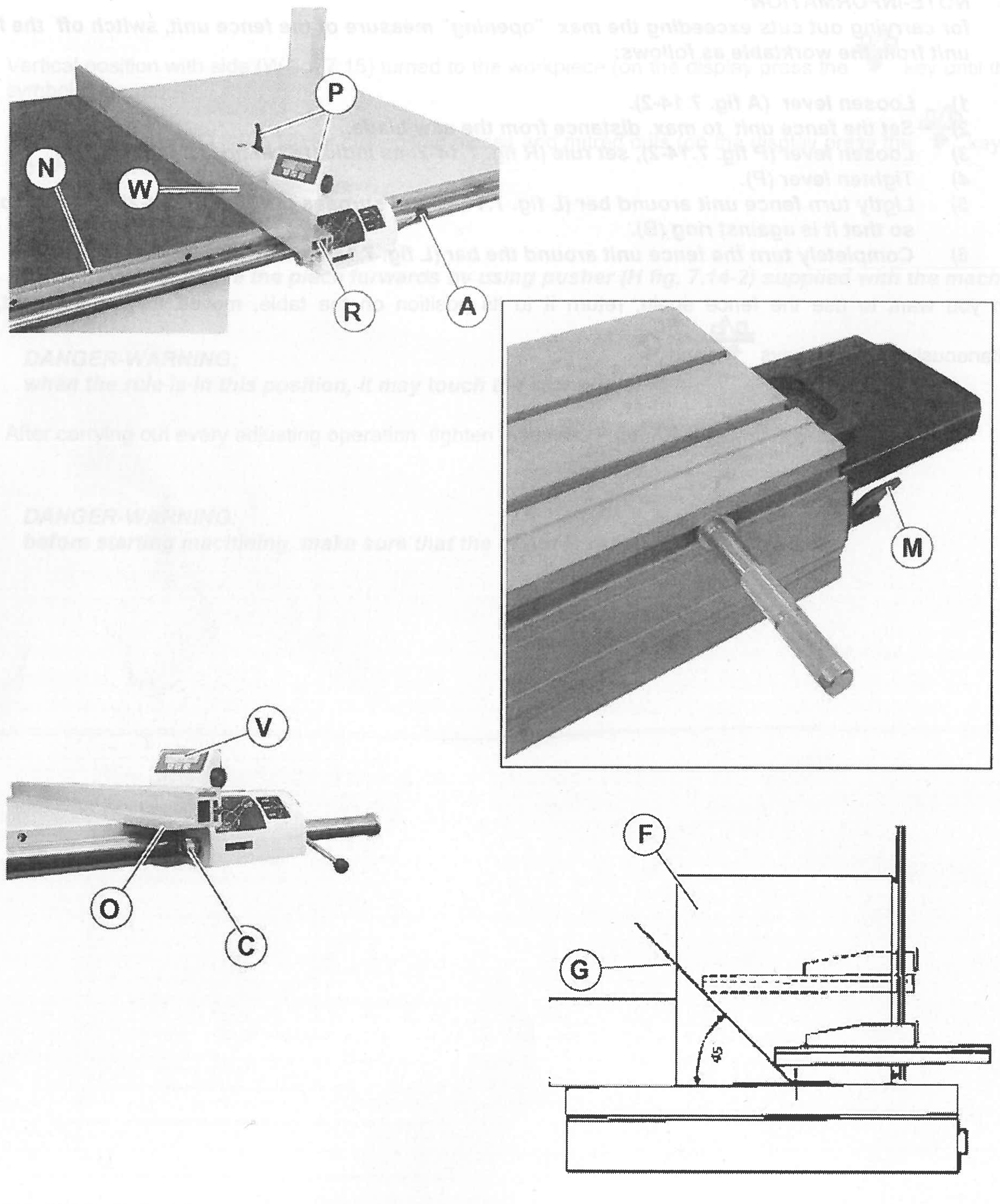

P
N
W
R
A
M
V
O
C
F
G
45°

Fig_7-15_SI400EP_NOVA_09-11.jpg

Fig. 7.15

DANGER-WARNING:
when for the execution of a peculiar working, the operator is obliged to put his hands near the tools, for safety reasons a proper pusher shall be used to move the workpiece forwards, to push it against the fence or to remove it after the cutting (see Chap.15).

USING THE PUSHERS

DANGER-WARNING:
before starting to work, ensure that the guard (D fig. 7.15A) is resting against the workpiece and, at the end of the operations, lower it until it comes into contact with the table.
To avoid getting too close to the blades with your hands, use the pusher (H fig. 7.15A) supplied with the machine.
After using this device return to its seating.

When you have to cut small workpieces and you have to push against the fence, you must use the pushers supplied with the machine.
The handle (A fig. 7.15A) is supplied as part of the equipment; it can be applied to pushers of various dimensions (see Section15).

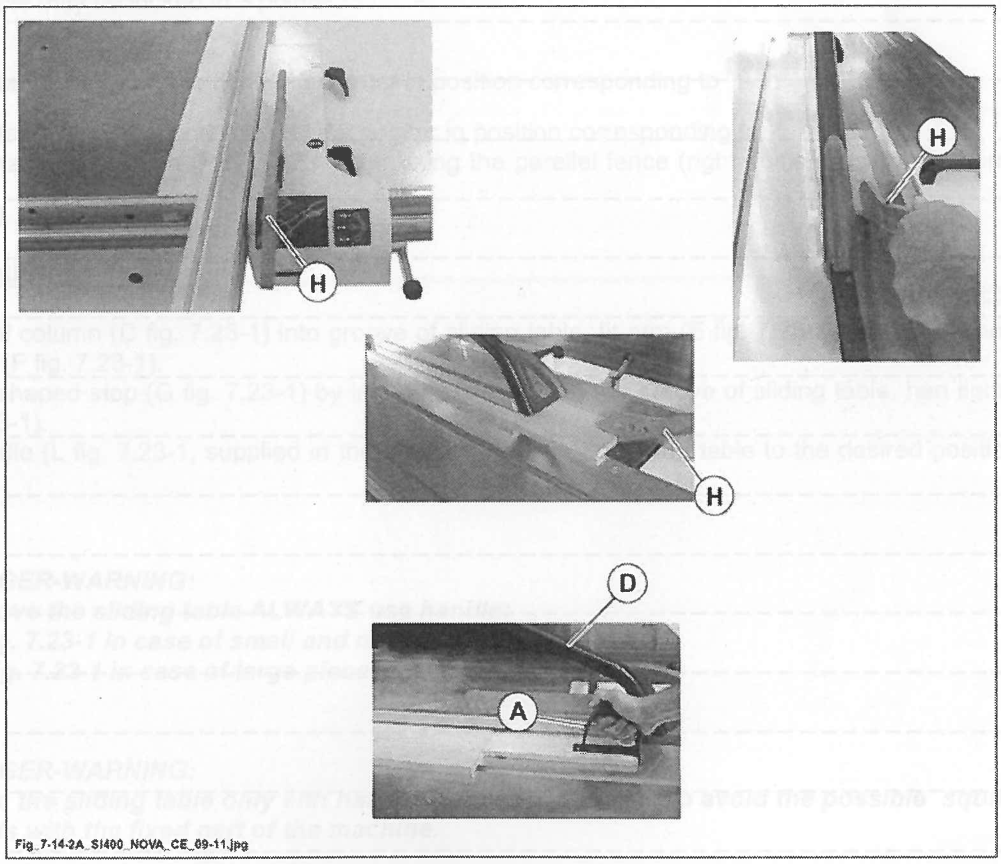


Fig_7-14-2A_SI400_NOVA_CE_09-11.jpg

Fig. 7.15A

(=_st-7-23)

7.23 USE OF SLIDING TABLE AND FRAME FOR LARGE PANELS

(=_ev_7-23_0.0)

7.23.1 ALUMINIUM SLIDING TABLE

(=_ev_7-23-1_0.0)

The aluminium sliding table moves on high precision slideways made of hardened steel in order to ensure the uniform and smooth motion with small friction, necessary for obtaining precise cuts.

The sliding table is locked and unlocked by means of lever (A fig. 7.23-1):

1) lever up: sliding table locked.
2) Lever down: sliding table unlocked.

The 3 locking positions of sliding table are indicated by reference elements (1 and 2 fig. 7.23-1) where an internal cam fits into slot on the rail.

The sliding table may be locked in 3 points:

- sliding table totally on the right (left pointer in position corresponding to ▶|◀);
- sliding table in central position (central pointer in position corresponding to ▶|◀);
- sliding table in position (P fig. 7.23-1) for using the parallel fence (right pointer in position corresponding to ▶|◀).

Fasten the following devices:

- fit gib of column (D fig. 7.23-1) into groove of sliding table, fit arm (E fig. 7.23-1) to the column, then tighten handle (F fig. 7.23-1).
- Fit tile-shaped stop (G fig. 7.23-1) by inserting the gib into the groove of sliding table, hen tighten handle (H fig. 7.23-1).
- Fit handle (L fig. 7.23-1, supplied in the accessories bag) to sliding table to the desired position then screw down it.

DANGER-WARNING:
to move the sliding table ALWAYS use handle:
- L fig. 7.23-1 in case of small and middle size pieces.
- M fig. 7.23-1 in case of large pieces.

DANGER-WARNING:
move the sliding table only eith handles (L o M fig. 7.23-1) to avoid the possible squashing of the hands with the fixed part of the machine.

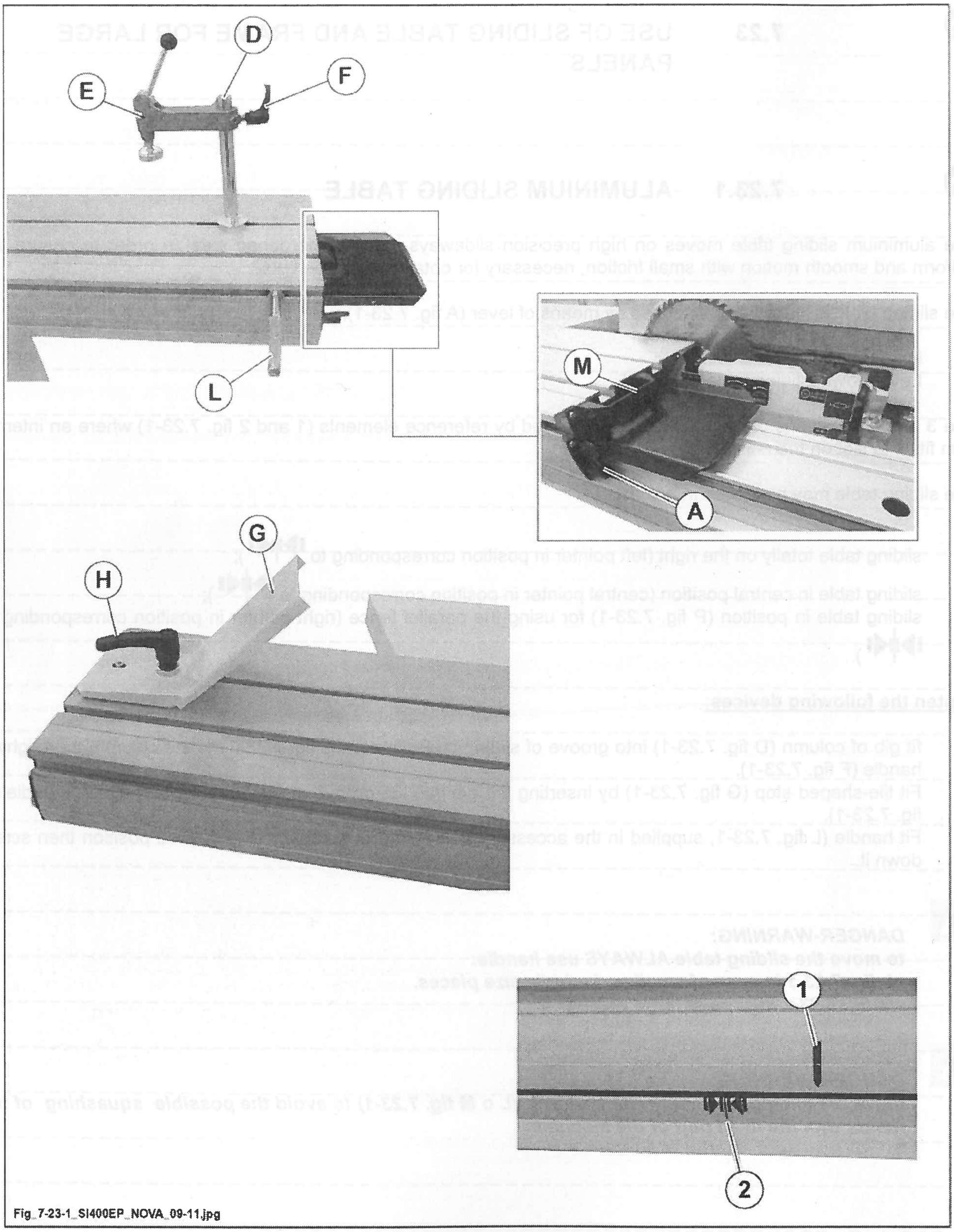

D
E
F
L
M
A
G
H
1
2
Fig_7-23-1_SI400EP_NOVA_09-11.jpg

Fig. 7.23-1

7.23.5 LONGITUDINAL POSITIONING OF THE FRAME

(=_ov_7-23-5_0.0)

- Lock the sliding table by means of lever (A fig. 7.23-5).
- Unlock the frame by loosening lever (B fig. 7.23-5)
- Move the frame.
- Lock lever (B fig. 7.23-5).

7.23.6 USE OF THE PRESSER UNIT

(=_ov_7-23-6_0.0)

OPT

- Operate on handle (F fig. 7.23-5) to adjust the foot height.

DANGER-WARNING:
to ensure a strong panel clamping, the foot shall be at a 2 mm height from the panel surface before lowering the lever.

- By means of lever (H fig. 7.23-5) lower foot (L fig. 7.23-5) for clamping the piece.

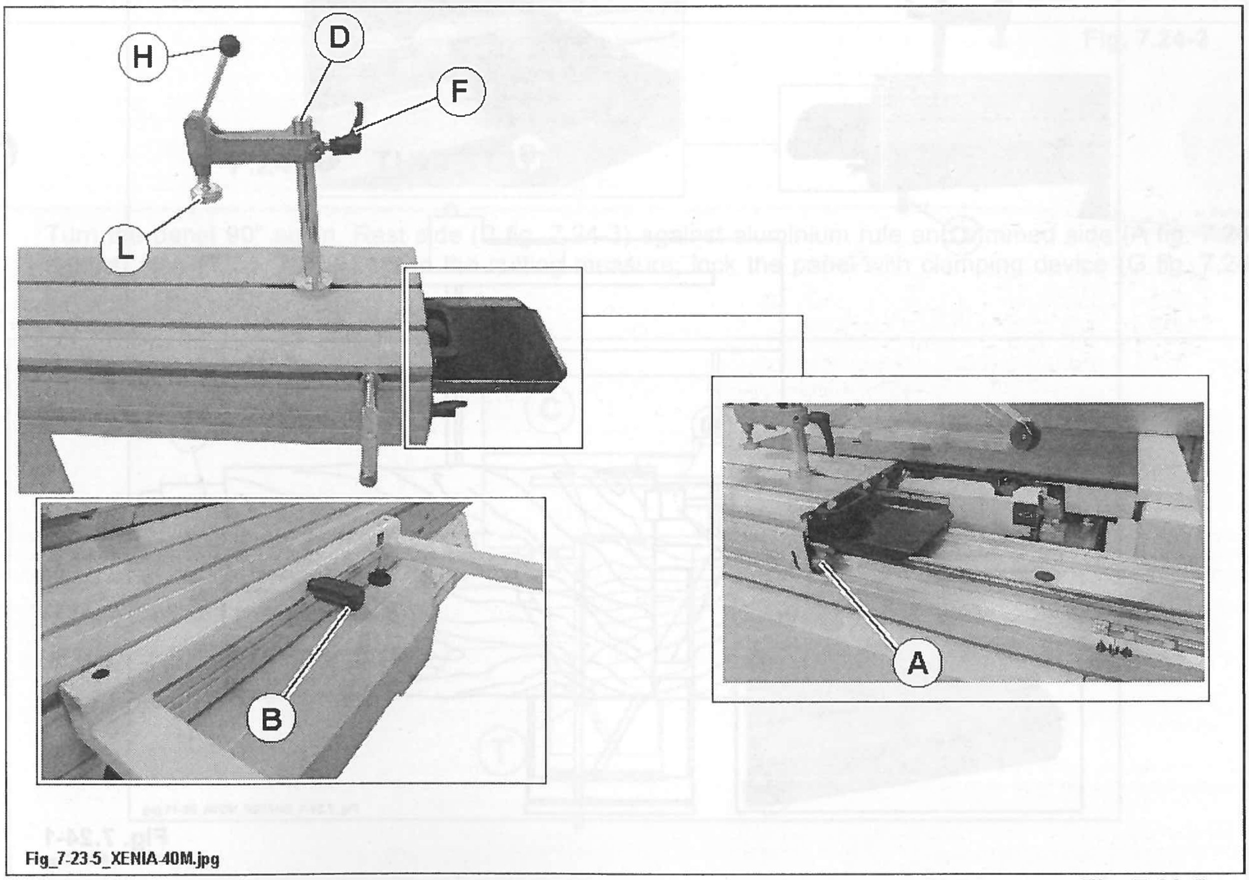


Fig_7-23-5_XENIA-40M.jpg

Fig. 7.23-5

7.24 EXAMPLE: LONGITUDINAL CUT

(=_ev_7-24_0.0)

7.24.1 FIRST CUT

(=_ev_7-24-1_0.0)

- Move the sliding table to the end of stroke (see fig. 7.24-1), lock lever (B fig. 7.24-1).
- Rest the panel on the sliding table and frame see fig. 7.24-1.
- Loosen handle (F fig. 7.24-1) and move the tile-shaped stop (D fig. 7.24-1) into the groove and rest it against the panel.
- Clamp the handle (F fig. 7.24-1).
- Move clamping device (E fig. 7.24-1) close to the panel.
- Unlock the sliding table by means of lever (B fig. 7.24-1).

DANGER-WARNING:
move the panel against the saw blade (set at the right height) by moving the sliding table by means of handle (C fig. 7.24-1).

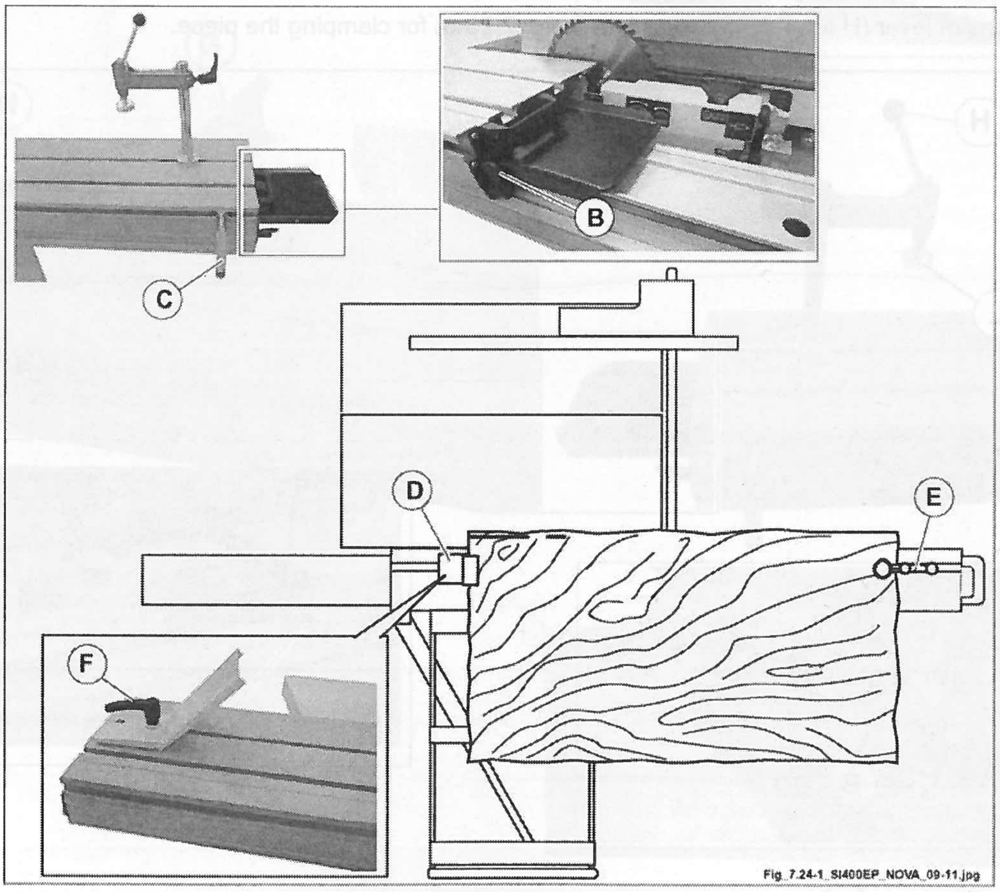


Fig. 7.24-1

7.24.2 SECOND CUT (SQUARING)

(=_ev_7-24-2_0.0)

- Turn the panel 90°. Rest the trimmed side (A fig. 7.24-2) against aluminium rule; lock the panel with clamping device (G fig. 7.24-2) then carry out cut (B fig. 7.24-2).

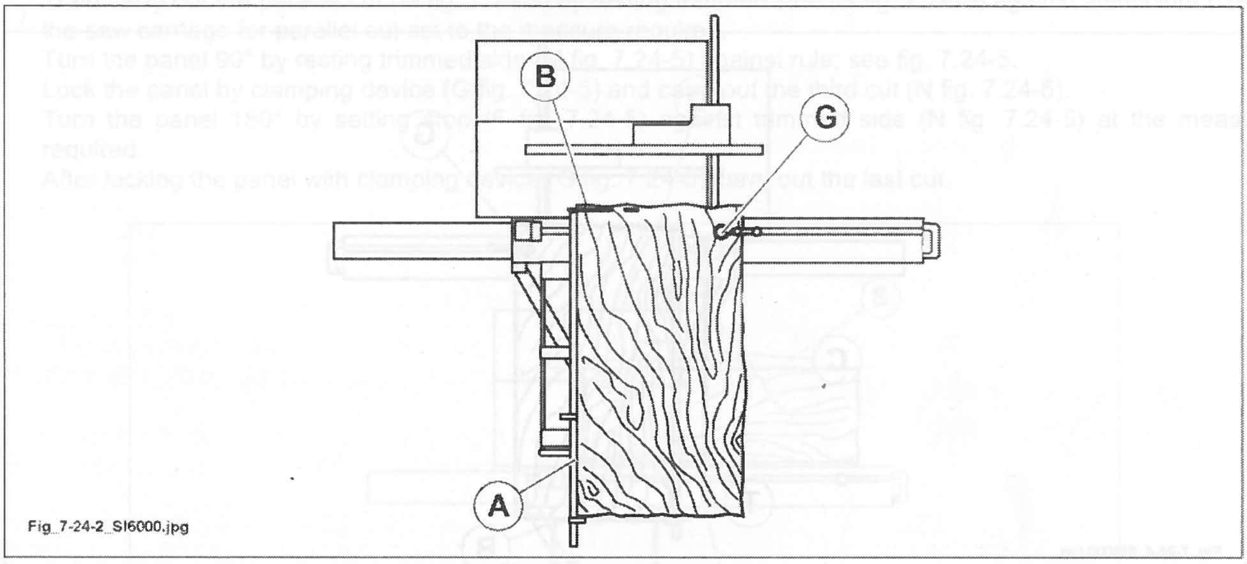


Fig. 7.24-2

7.24.3 THIRD CUT

(=_ev_7-24-3_0.0)

- Turn the panel 90° again. Rest side (B fig. 7.24-3) against aluminium rule and trimmed side (A fig. 7.24-3) against stop (T fig. 7.24-3) set to the cutting measure; lock the panel with clamping device (G fig. 7.24-3) carry out cut (C fig. 7.24-3).

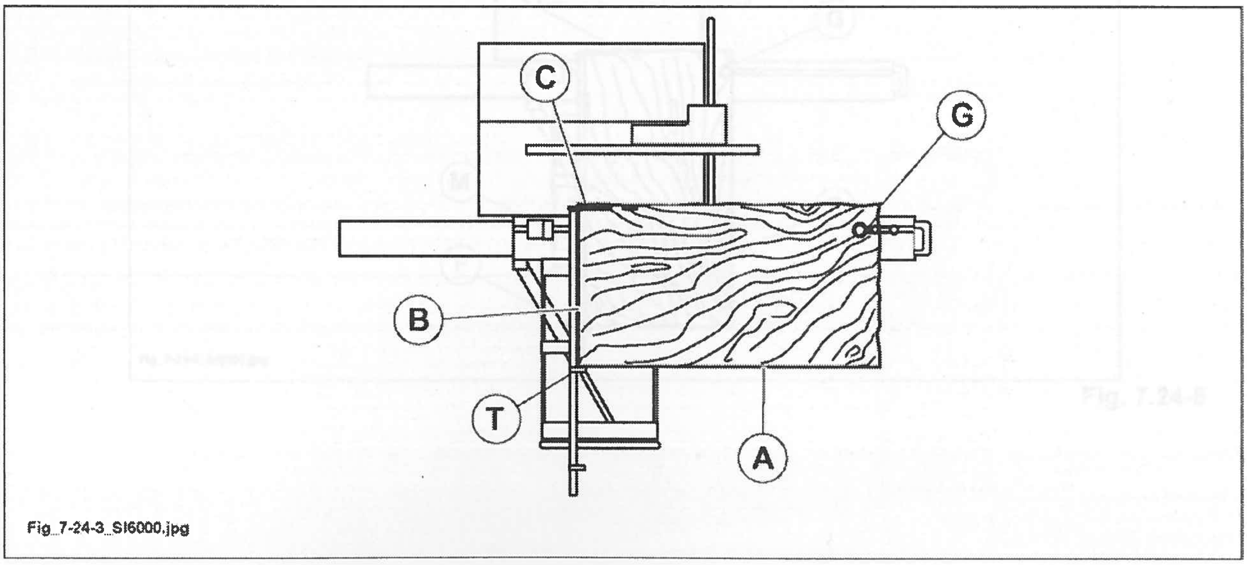


Fig. 7.24-3

7.24.4 FOURTH CUT

(=_ev_7-24-4_0.0)

- Turn panel 90° again. Rest side (C fig. 7.24-4) against aluminium rule and side (B fig. 7.24-4) to stop (T fig. 7.24-4) set to the cutting measure required; lock the panel with clamping device (G fig. 7.24-4) then carry out cut (D fig. 7.24-4).

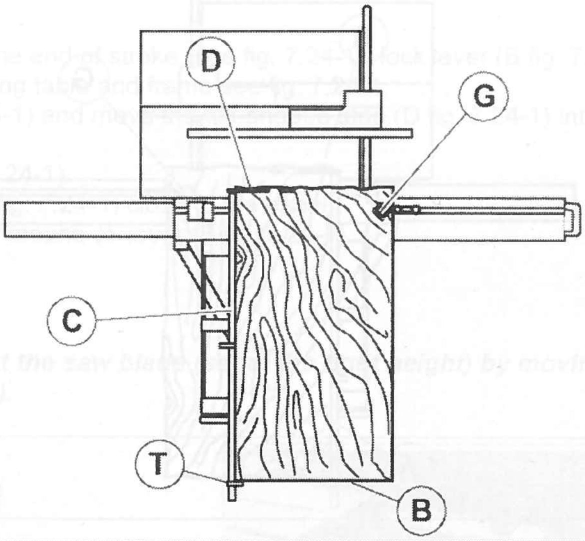


Fig_7-24-4_SI6000.jpg

Fig. 7.24-4

7.24.5 CUT FOR OBTAINING PIECES WITH OPPOSITE SIDES PARALLEL

(=_ev_7-24-5_0.0)

- Carry out the trimming cut (S fig. 7.24-5) as in the previuos way (first cut).
- Then carry out the parallel cut (M fig. 7.24-5) by resting trimmed side (S fig. 7.24-5) against aluminium rule of the saw carriage for parallel cut set to the measure required.
- Turn the panel 90° by resting trimmed side (M fig. 7.24-5) against rule; see fig. 7.24-5.
- Lock the panel by clamping device (G fig. 7.24-5) and carry out the third cut (N fig. 7.24-5).
- Turn the panel 180° by setting stop (F fig. 7.24-5) against trimmed side (N fig. 7.24-5) at the measure required.
- After locking the panel with clamping device (G fig. 7.24-5) carry out the last cut.

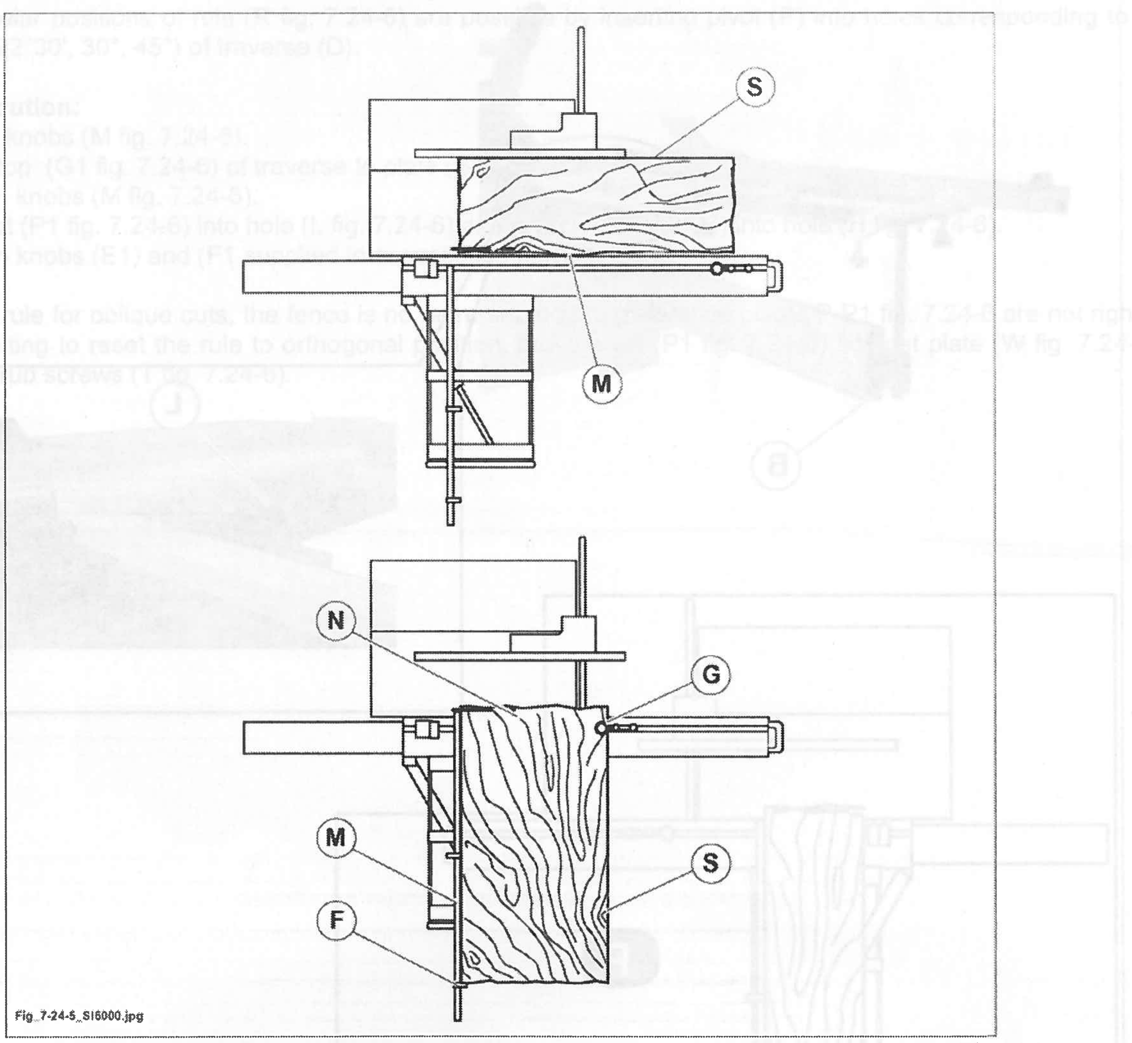


Fig. 7.24-5

To let the sliding table cover the entire stroke proceed as follows:

1) loosen the handle (L fig. 7.24-5A).
2) Totally move the sliding table to the end of stroke (entry side).
3) Move the frame until the telescopic support (B fig. 7.24-5A) permits that.
4) Lock the frame with handle (L fig. 7.24-5A).
5) Make sure that the stroke of sliding table and frame is sufficient for the working.

It is possible to work also with the rule following the panel, (see P fig. 7.24-5A) but as in that case the squaring stroke decreases very much, this system is recommended only for small pieces.

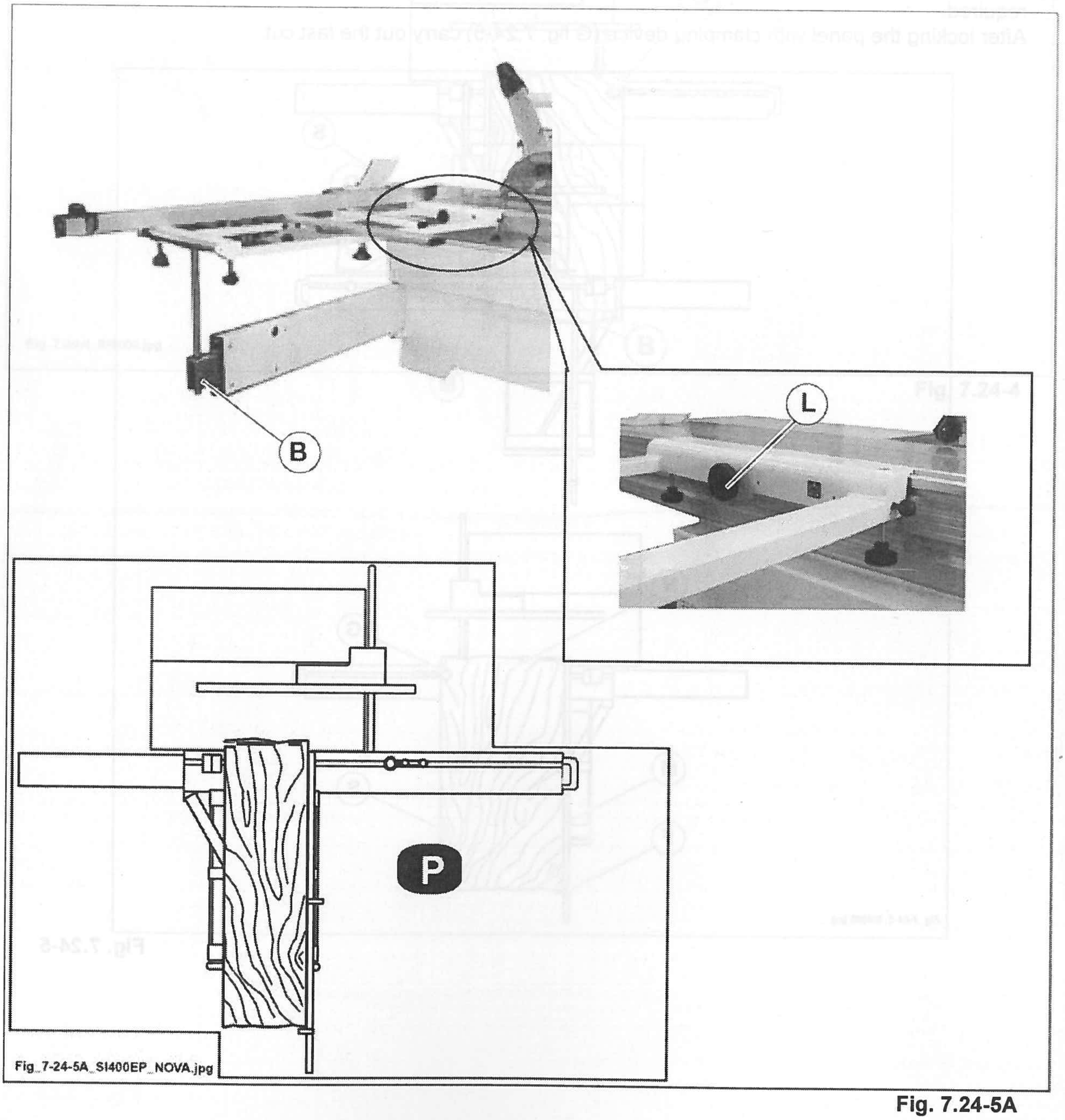


Fig. 7.24-5A

7.24.6 RULE ADJUSTING FOR OBLIQUE CUTS

(=_ev_7.24.6_0.0)

For oblique cuts , unscrew knobs (B fig. 7.24-6) to change position of rule (R fig. 7.24-6).
Loosen grub screws (T fig. 7.24-6) of both pivots (P - P1 fig. 7.24-6)

For an oblique cut at +45°:

- loosen pivots (M fig. 7.24-6)
- Rest stop (G fig. 7.24-6) of traverse (D) to cam (S).
- Tighten knobs (M fig. 7.24-6).
- fit pivot (P1 fig. 7.24-6) into hole (A) of the frame and pivot (P) into hole (C) of traverse.
- Tighten knobs (E) and (F supplied in accessories bag).

Different angular positions of rule (R fig. 7.24-6) are possible by inserting pivot (P) into holes corresponding to to angles (15°, 22°30', 30°, 45°) of traverse (D).

-45°-cut execution:

- loosen knobs (M fig. 7.24-6).
- Rest stop (G1 fig. 7.24-6) of traverse to plate (S1).
- Tighten knobs (M fig. 7.24-6).
- Fit pivot (P1 fig. 7.24-6) into hole (L fig. 7.24-6) and pivot (P fig. 7.24-6) into hole (H fig. 7.24-6).
- Tighten knobs (E1) and (F1 supplied in accessories bag).

By using the rule for oblique cuts, the fence is no more set to zero (reference pivots P-P1 fig. 7.24-6 are not rightly set). After cutting to reset the rule to orthogonal position, move pivot (P1 fig. 7.24-6) against plate (W fig. 7.24-6) and tighten grub screws (T fig. 7.24-6).

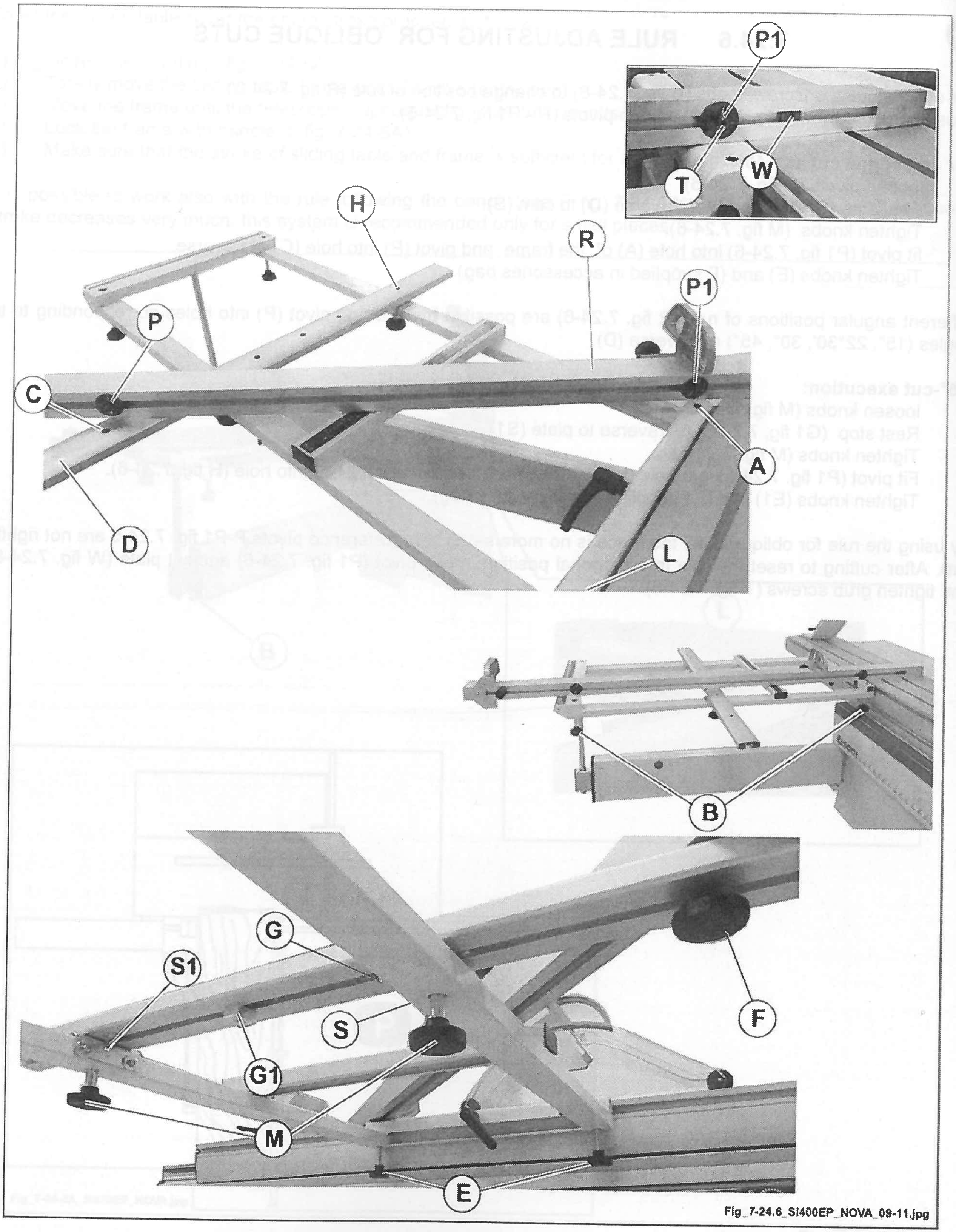

P1
T
W
H
R
P1
P
C
A
D
L
B
G
S1
F
S
G1
M
E

Fig_7-24.6_SI400EP_NOVA_09-11.jpg

Fig. 7.24-6

7.26 ADDITIONAL DEVICE FOR OBLIQUE CUTS

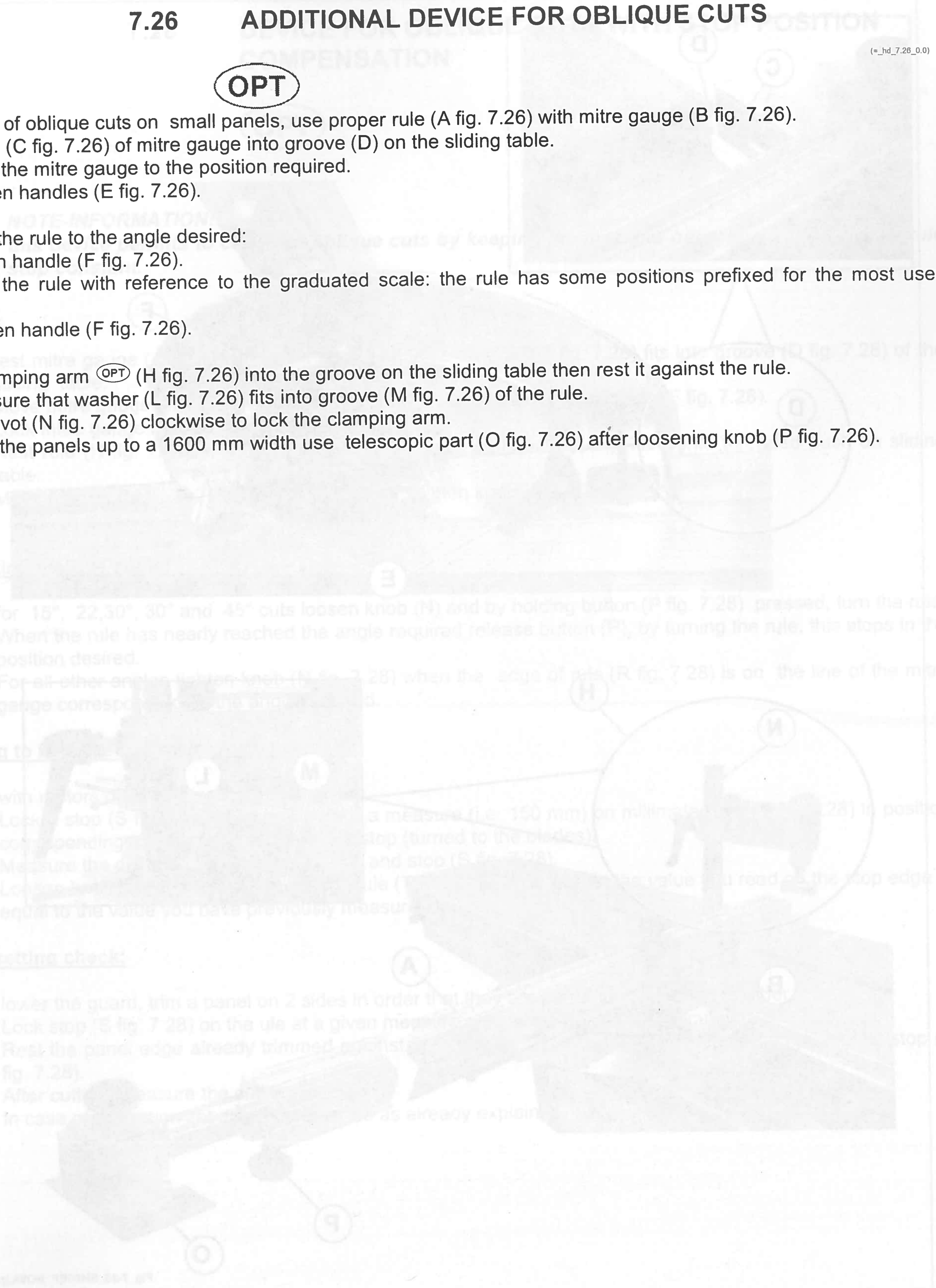
(=_hd_7.26_0.0)

OPT

In case of oblique cuts on small panels, use proper rule (A fig. 7.26) with mitre gauge (B fig. 7.26).
- Fit gib (C fig. 7.26) of mitre gauge into groove (D) on the sliding table.
- Move the mitre gauge to the position required.
- Tighten handles (E fig. 7.26).

To set the rule to the angle desired:
- loosen handle (F fig. 7.26).
- Turn the rule with reference to the graduated scale: the rule has some positions prefixed for the most used angles.
- Tighten handle (F fig. 7.26).

Fit clamping arm OPT (H fig. 7.26) into the groove on the sliding table then rest it against the rule.
Make sure that washer (L fig. 7.26) fits into groove (M fig. 7.26) of the rule.
Turn pivot (N fig. 7.26) clockwise to lock the clamping arm.
To cut the panels up to a 1600 mm width use telescopic part (O fig. 7.26) after loosening knob (P fig. 7.26).



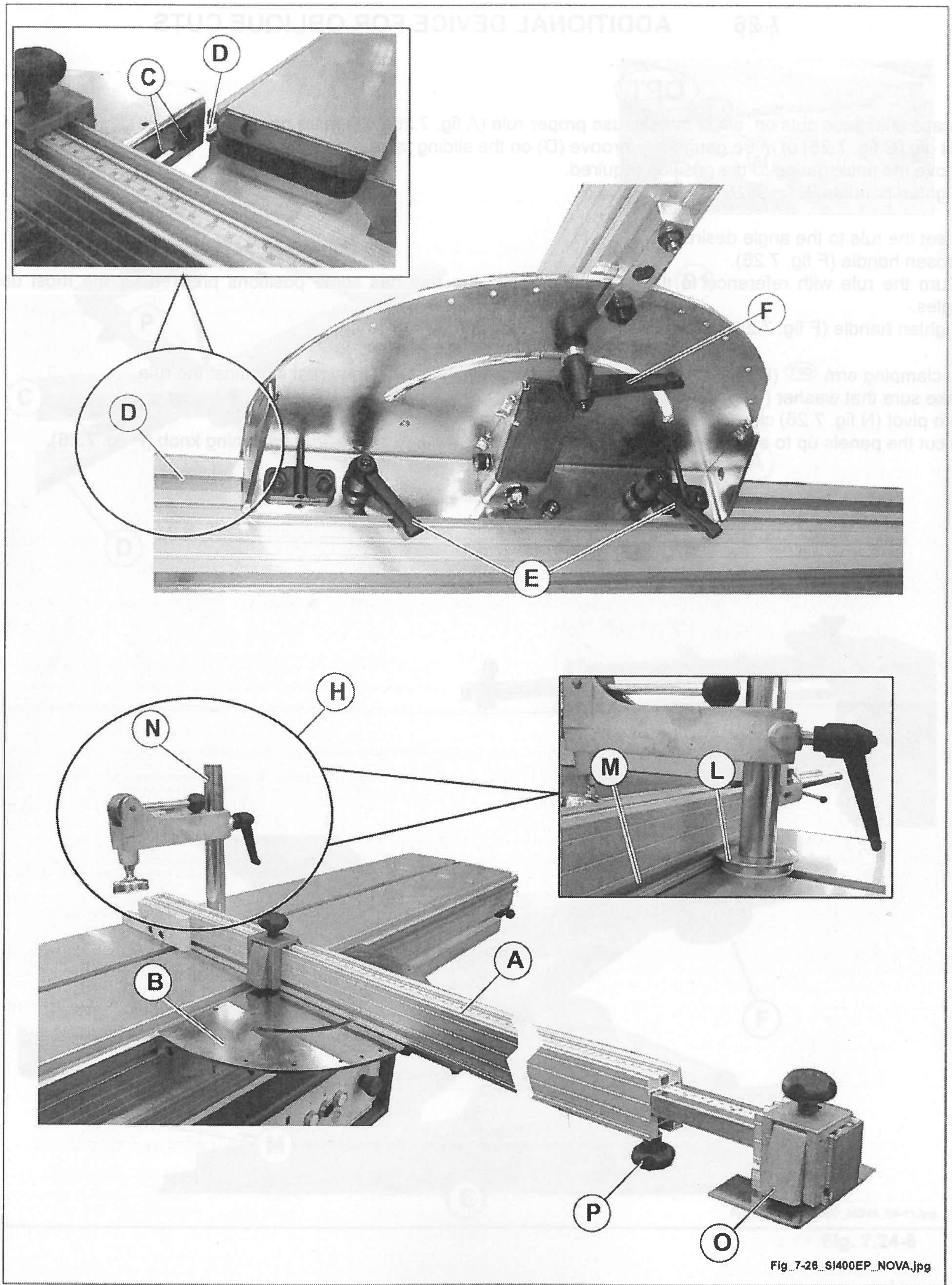

C
D
D
F
E
H
N
M
L
A
B
P
O
Fig_7-26_SI400EP_NOVA.jpg

Fig. 7.26

7.28 DEVICE FOR OBLIQUE CUTS WITH STOP POSITION COMPENSATION

(=_gu_7-28_0.0)

OPT

NOTE-INFORMATION:
this device permits to carry out oblique cuts by keeping the measure between saw blade and rule stop constant.

Fitting:

1) rest mitre gauge (A fig. 7.28) on the sliding table so that gib (C fig. 7.28) fits into groove (D fig. 7.28) of the sliding table.
2) Move mitre gauge until the pivot of knob (E fig. 7.28) fits into reference plate (F fig. 7.28).
3) Lock mitre gauge by means of lever (G fig. 7.28).
3) Rest rule (H fig. 7.28) on the mitre gauge, screw down handle (L fig. 7.28) into threaded bush on sliding table.
4) Move bracket (M fig. 7.28) to the end of stroke, tighten knob (N fig. 7.28).

Adjusting the rule angle:

1) for 15°, 22,30°, 30° and 45° cuts loosen knob (N) and by holding button (P fig. 7.28) pressed, turn the rule. When the rule has nearly reached the angle required release button (P), by turning the rule, this stops in the position desired.
2) For all other angles tighten knob (N fig. 7.28) when the edge of rule (R fig. 7.28) is on the line of the mitre gauge corresponding to the angle required.

Setting to zero the millimeter rule:

1) with motors off lift the saw guard.
2) Lock a stop (S fig. 7.28) in order to read a measure (i.e: 150 mm) on millimeter rule (T fig. 7.28) in position corresponding to the internal edge of the stop (turned to the blades).
3) Measure the distance between saw blade and stop (S fig. 7.28).
4) Loosen knob (U fig. 7.28) and move the rule (T fig. 7.28) in order that the value you read on the stop edge is equal to the value you have previously measured.

Zero setting check:

- lower the guard, trim a panel on 2 sides in order that they are perpenducular each to other.
- Lock stop (S fig. 7.28) on the ule at a given measure so that the panel may be cut.
- Rest the panel edge already trimmed against rule (H fig. 7.28) and the other trimmed edge against stop (S fig. 7.28).
- After cutting, measure the cutting width.
- In case of correction set the millimeter rule as already explained.

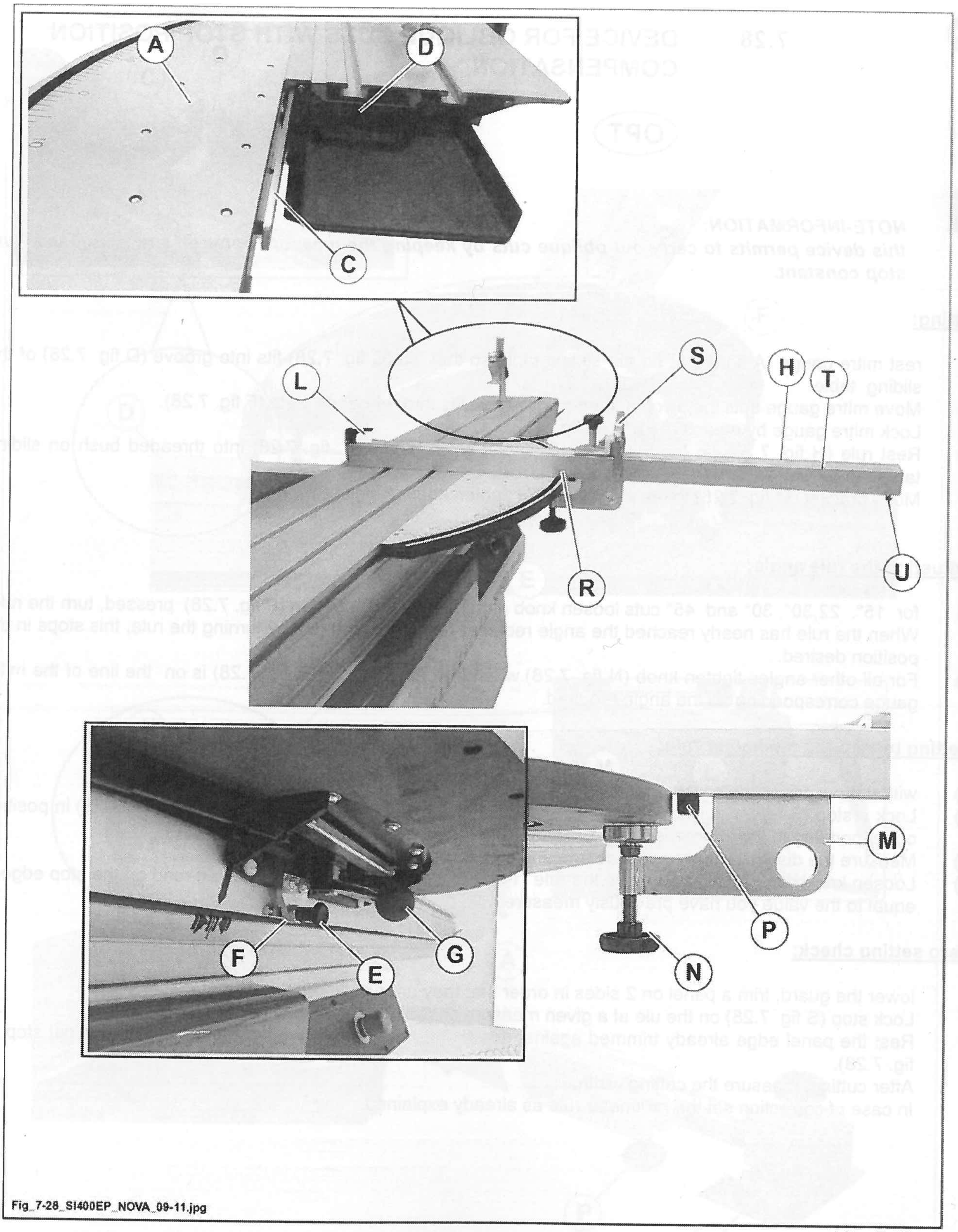

A
D
C
S
L
H
T
R
U
M
P
F
E
G
N
Fig_7-28_SI400EP_NOVA_09-11.jpg

Fig. 7.28

7.33 ADDITIONAL DEVICE FOR PARALLEL CUTS

(=_gu_7-33_0.0)

OPT

To carry out parallel cuts rest the panel side already trimmed to stop (A fig. 7.33) of the rest rule and to the stop of additional device (B fig.7.33): both stopos are set at the same distance from the saw blade.

Fitting:

1) rest the device on the sliding table so that the gib fits into groove (D fig. 7.33) of the sliding table.
2) Move the device to the point desired.
3) Tighten knobs (P fig. 7.33).

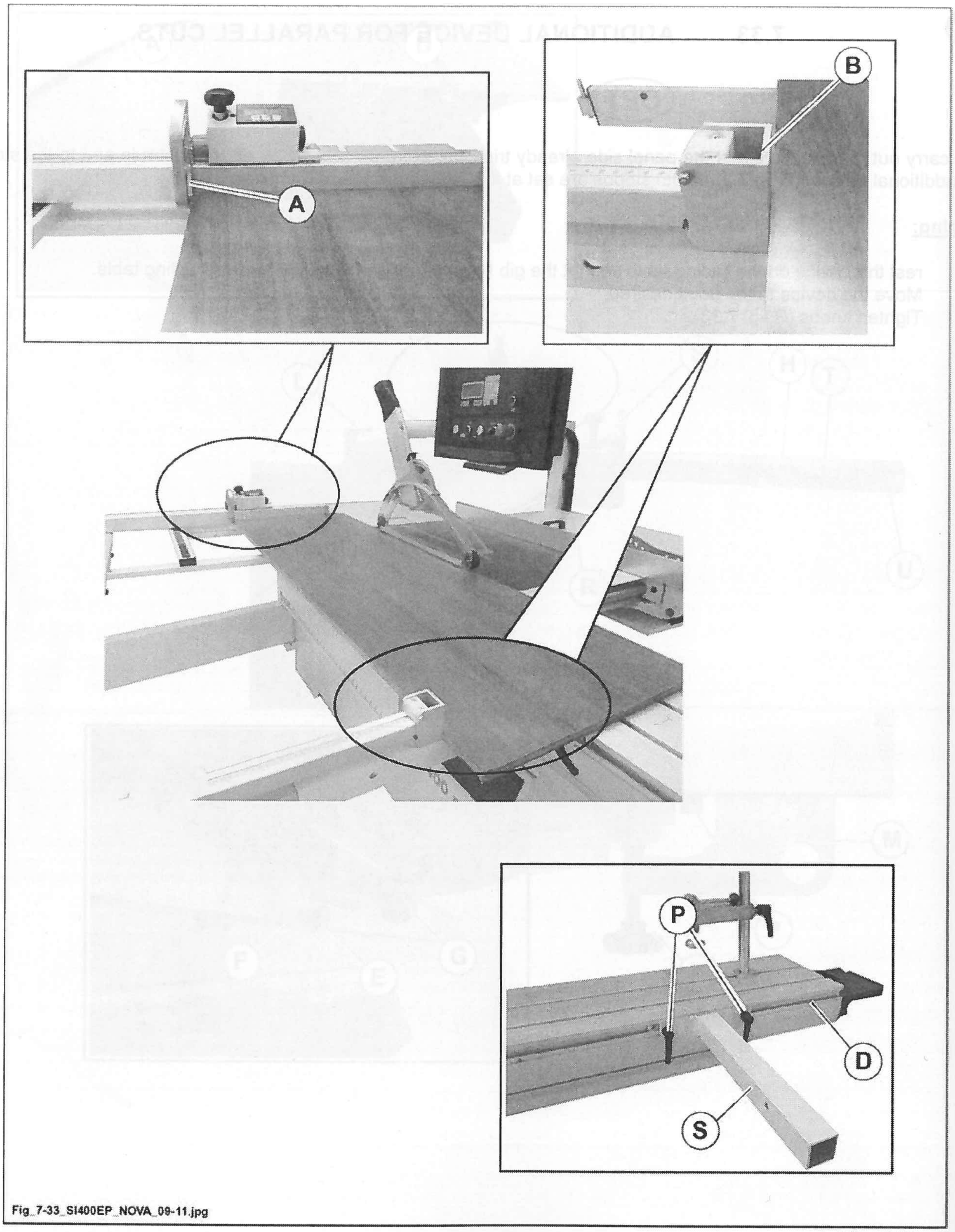

A
B
P
D
S
Fig_7-33_SI400EP_NOVA_09-11.jpg

Fig. 7.33

Setting:

1) with motors off lift the saw guard.
2) Loosen knob (F fig. 7.33A).
3) Move the device so that stop (B fig. 7.33A) touches the saw blade (make sure that the saw blade is in 90° position).
4) Loosen knob (E fig. 7.33A), move the millimeter rule (G fig. 7.33A) in order to read out 0 on the internal edge (H fig. 7.33A).

Cutting example

- Set stop unit (A fig. 7.33A) and additional device at the same measure (i.e: 600 mm).
- Raise stop (B fig. 7.33A).
- Rest the panel to stop (N) and at same time rest it to the rule so that stop (A) may rise.
- Carry out the first cut (trimming).
- Lower stop (B1 fig. 7.33A) and rest the trimmed edge to stops (A and B1) at the same time.
- Carry out the second cut (parallel cut).

After loosening knob (D fig. 7.33A) it is possible to withdraw the top part of the device by leaving the support (S fig. 7.33A) fitted to the sliding table; in this way the support may be used to rest the panels.

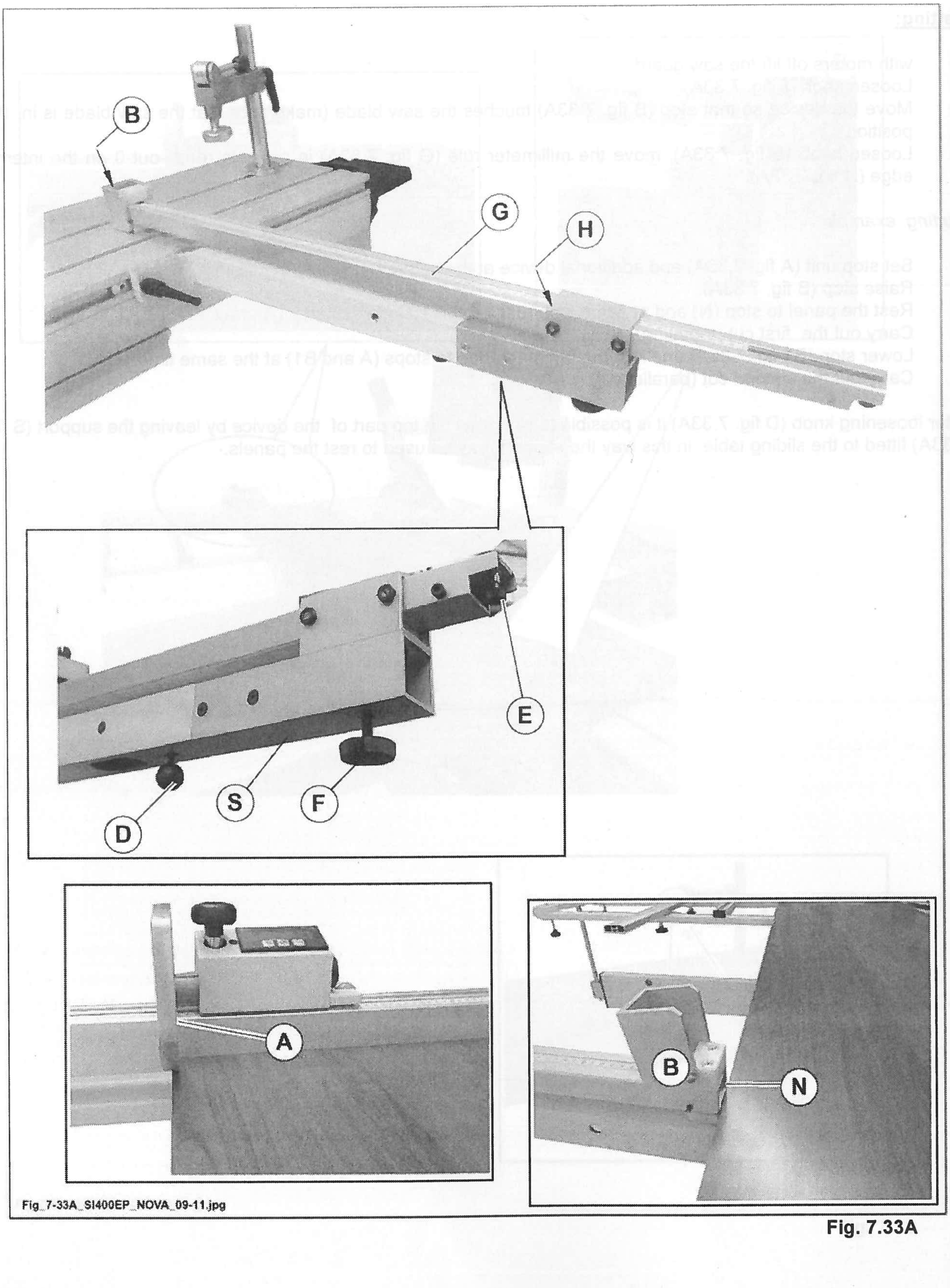


Fig_7-33A_SI400EP_NOVA_09-11.jpg

Fig. 7.33A

INDEX

15.1 Pusher 2

15.1 PUSHER

(=_ev_15-1_0.0)

OPT

DANGER-WARNING:
when for the execution of a peculiar working, the operator is obliged to put his hands near the tools, for safety reasons a proper pusher shall be used to move the workpiece forwards, to push it against the fence or to remove it after the cutting.

Handle (A fig. 15.1) is supplied for this purpose and can be applied to pushers (D fig. 15.1) of different size by means of screws (B and C fig. 15.1).

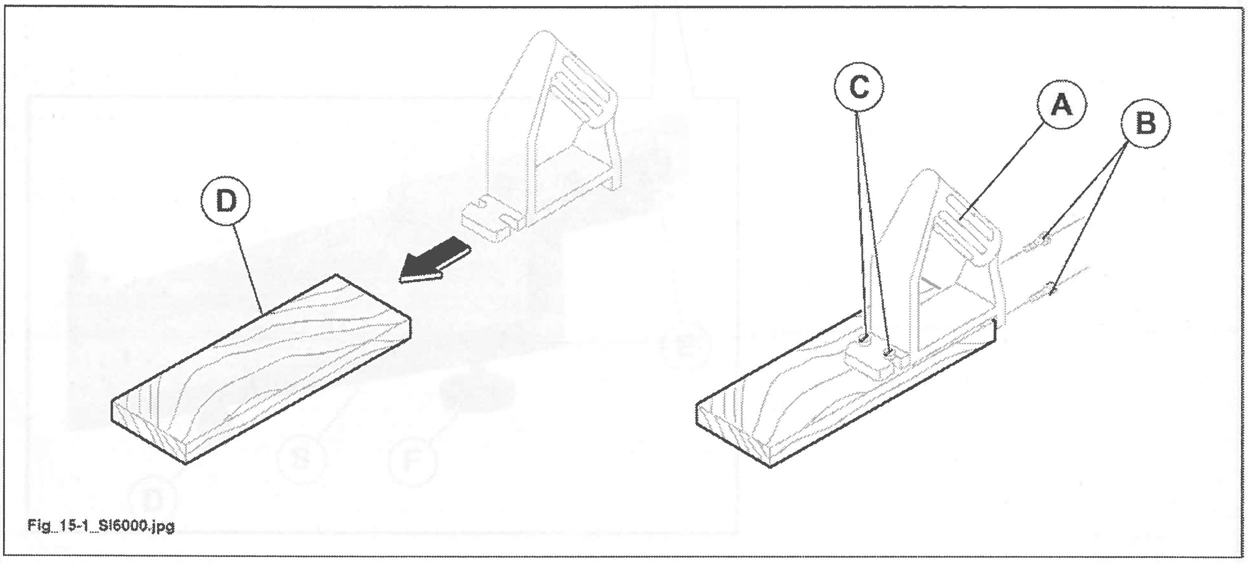


Fig. 15.1

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V1SC

(=_v1sc)

16.1 GENERAL FEATURES

(=_ev_16-1_0.0)

- Magnetic sensor directly fitted.
- Display LCD.
- Measure setting by means of keyboard.
- mm / inch / degree conversion.
- Programmable counting reverse.
- Signaling on the display: battery is down.
- Error message: max. distance between sensor and band surpassed.
- Hardware inibition to protect the fixed data you have entered.

16.2 SPECIFICATIONS

(=_ev_16-2_0.0)

SPECIFICATIONS			
Supply by battery (type LR 14)	1,5	Vdc	
Max. sensor speed	5	m/sec	
Max. sensor-band distance	2	mm	
Instrument accuracy	± 0,1	mm	
Working temperature	0 ÷ + 50	° C	

16.3 INSTRUCTIONS FOR THE OPERATOR

(=_ev_16-3_0.0)

A) To recall the preset measure:

- press ENTER and SET at the same time.

B) Absolute / incremental mode selection:

- to select the incremental mode press $\frac{\text{abs}}{\text{incr}}$.
- The display is automatically set to zero, symbol ◀◀◀ appears.
- Press $\frac{\text{abs}}{\text{incr}}$ again to return to absolute mode .

NOTE-INFORMATION:
in incremental mode the display does not carry out the zero setting.

C) To modify the preset measure:

- press ENTER and $\frac{\text{abs}}{\text{incr}}$ at the same time for 3 seconds.
- rES appears on the display.
- Press ENTER until rEF
  and then a number corresponding to the Preset value already set at factory appear.
- When it is necessary to modify the value press $\frac{\text{abs}}{\text{incr}}$.
- To move by one decade to the left press SET .
- To confirm press ENTER .
- To quit press ENTER over and over again.

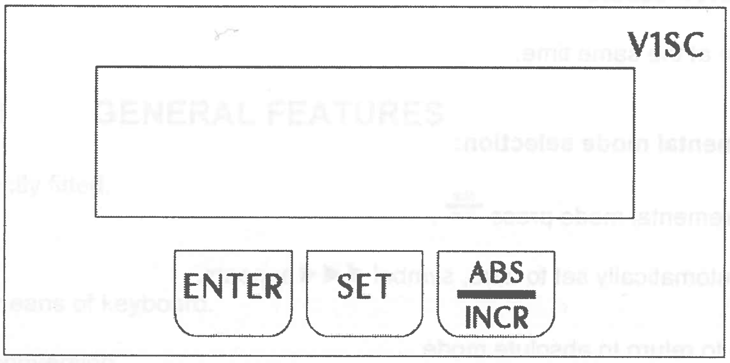

Fig 16-3 SC 400.jpg

Fig. 16.3

16.4 MESSAGES ON THE DISPLAY

(=_ev_16-4_0.0)

1) S_Err .... indicates that the distance between reading sensor and magnetic band is too large or the sensor cable is broken.
To reset move the sensor close to the band or replace the reader.

2) Symbol ▭ indicates that the battery is almost down.
To reset replace the battery.

NOTE-INFORMATION:
the internal parameters as well as the real measure are not erased when the battery is taken off.

16.5 FOR SKILLED OPERATORS AUTHORIZED BY SCM

(=_ev_16-5_0.0)

Programming the parameters in the internal memory

To enter into the internal memory of the display press ENTER and abs/incr at the same time for about 3 seconds.

A) On the display you see:

- **rES**
  and then a number corresponding to the reader resolution type.

- To modify the resolution press abs/incr :

0,1 = resolution in mm
0,001 = resolution in inches
FrEE = resolution for angular measuring.

- To confirm press ENTER .

B) On the display you see:

- **corFAc**
  and then a number (1.00000) set at factory corresponding to the factor for multiplying the sensor pulses.

- To modify the factor press $\frac{\text{abs}}{\text{incr}}$.

- Press SET to move by one decade to the left.

- To confirm press ENTER .

C) On the display you see:

- **rEF**
  and then a number corresponding to the Preset value already set at factory.

- To modify the value press $\frac{\text{abs}}{\text{incr}}$.

- Press SET to move by one decade to the left.

- To confirm press ENTER .

D) On the display you see:

- **dir**
  and then
  uP
  or
  dn
  corresponding to the sensor counting direction appear on the display.

- To modify the value press $\frac{\text{abs}}{\text{incr}}$.

- To confirm and to quit the parameters press ENTER .

  The last measure displayed appears on the display.

If rES parameter has been set to: FrEE (angular measuring) immediately other two parameters (FAc and dP) appear.

E) On the display you see:

- **FAc**
  a 6 - digit number corresponding to the calculation factor to get angular measuring.
  This factor is got as follows:

Example:

angle display of an arc of circumference from 0° to 90° with magnetic band set to radius r = 300 mm.

Circumference	2 x π x r = 2 x 3,14 x 300 = 1884,96 (on 360°)
Circumference covered	1884,96 : 4 = 471,24 (on 90°)
Calculation factor	900 : 471,24 = 0,01909
FAc to be entered	001909 (enter only the first 6 decimals of the calculation)

- To modify the value press abs/incr .

- Press SET to move by one decade to the left.

- To confirm press ENTER .

F) On the display you see:

- **dP**
  and then a number corresponding to the angle display type.

0,0 = display in tenths of a degree
0,00 = display in hundredths of a degree.

- To modify the value press abs/incr .

- To confirm press ENTER .

G) On the display you see:

- **corFAc**

See instructions on the previous point B).

V2SC

(=_titolo_v2sc)

16.7 GENERAL FEATURES

(=_v2sc_16-7)

- Magnetic sensor directly fitted.
- Display LCD.
- Measure setting by means of keyboard.
- mm / inch / degree conversion.
- Programmable counting reverse.
- Signaling on the display: battery is down.
- Error message: max. distance between sensor and band surpassed.
- Hardware inibition to protect the fixed data you have entered.

16.7.1 SPECIFICATIONS

(=_v2sc_16-7-1)

SPECIFICATIONS			
Supply by battery (type LR 14)	1,5	Vdc	
Max. sensor speed	5	m/sec	
Max. sensor-band distance	2	mm	
Instrument accuracy	± 0,1	mm	
Working temperature	0 ÷ + 50	° C	

16.7.2 INSTRUCTIONS FOR THE OPERATOR

(=_v2sc_16-7-2)

A) To recall the preset measure:

- press ENTER and SET at the same time.

B) Absolute / incremental mode selection:

- to select the incremental mode press abs/incr .
- The display is automatically set to zero, symbol ◀◀◀ appears.
- Press abs/incr again to return to absolute mode .

NOTE-INFORMATION:
in incremental mode the display does not carry out the zero setting.

C) To modify the preset measure:

- press ENTER and abs/incr at the same time for 3 seconds.
- rES appears on the display.
- Press ENTER until rEF and then a number corresponding to the Preset value already set at factory appear.
- When it is necessary to modify the value press abs/incr .
- To move by one decade to the left press SET .
- To confirm press ENTER .
- To quit press ENTER over and over again.

D) Fence position selection:

- press ENTER to select the fence position:
- The display shows either the └ or ┘ symbol.
- The display shows the updated measurement.

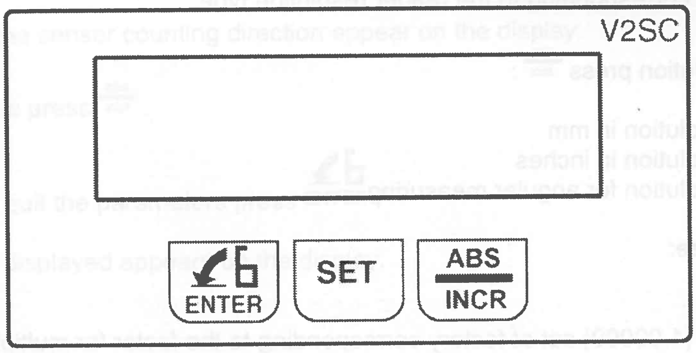

Fig_16-3_SC_31_CE_CLA.jpg

Fig. 16.7

16.7.3 MESSAGES ON THE DISPLAY

(=_v2sc_16-7-3)

1) NO TAPE........ indicates that the distance between reading sensor and magnetic band is too large or the sensor cable is broken.
To reset move the sensor close to the band or replace the reader.

2) Symbol ▭ indicates that the battery is almost down.
To reset replace the battery.

NOTE-INFORMATION:
the internal parameters are not deleted when the battery is removed.

16.7.4 FOR SKILLED OPERATORS AUTHORIZED BY SCM

(=_v2sc_16-7-4)

Programming the parameters in the internal memory

To enter into the internal memory of the display press ENTER and abs/incr at the same time for about 3 seconds.

A) On the display you see:

- **rES**
  and then a number corresponding to the reader resolution type.

- To modify the resolution press abs/incr :

0,1 = resolution in mm
0,001 = resolution in inches
FrEE = resolution for angular measuring.

B) On the display you see:

- **corFAc**
  and then a number (1.00000) set at factory corresponding to the factor for multiplying the sensor pulses.

- To modify the factor press abs/incr .

- Press SET to move by one decade to the right.

- To confirm press ENTER .

C) On the display you see:

- **rEF**
  and then a number corresponding to the Preset value already set at factory.

- To modify the value press abs/incr .

- Press SET to move by one decade to the right.

- To confirm press ENTER .

The following appears on the display:

- **OFFS**
  and, then, a number (-0034,0) set in the factory, corresponding to the difference between the two sides of the fence.

- To modify the factor press abs/incr .

- Press SET to move by one decade to the right.

- To confirm press ENTER .

D) On the display you see:

- **dir UP**
  or
  corresponding to the sensor counting direction appear on the display.
- To modify the value press abs/incr .
- To confirm and to quit the parameters press ENTER .

  The last measure displayed appears on the display.

A) On the display you see:

- rES
  and then a number corresponding to the sensor resolution

- To modify the resolution press

0,1 = resolution in mm
0,001 = resolution in inches
FrEE = resolution for angular measuring

B) On the display you see:

- corFAc
  and then a number (1,00000) set at factory corresponding to the factor for multiplying the sensor pulses.

- To modify the factor press

- Press « to move by one decade to the right.

- To confirm press ENTER

C) On the display you see:

- rEF
  and then a number corresponding to the Preset value already set at factory.

- To modify the value press

- Press « to move by one decade to the right.

- To confirm press ENTER

The following appears on the display:
- OFFS
  and, then, a number (-0034,0) set in the factory, corresponding to the difference between the two sides of the fence.

- To modify the factor press

- Press « to move by one decade to the right.

- To confirm press ENTER

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20.1 MACHINE CLEANING

(=_ev_20-1_0.0)

DANGER-WARNING:
all cleaning operations are to be carried out by the machine operator or by skilled technician.

DANGER-WARNING:
before carrying out maintenance operations, adjustments or to dismount any machine member turn main switch to 0, lock it then indicate this with a sign.

FORBIDDEN:
DO NOT USE COMPRESSED AIR; by blowing with a strong air jet (fig. 20.1) chips,dust and dirt of any type may enter into the moving members, so the machine is no more efficient.

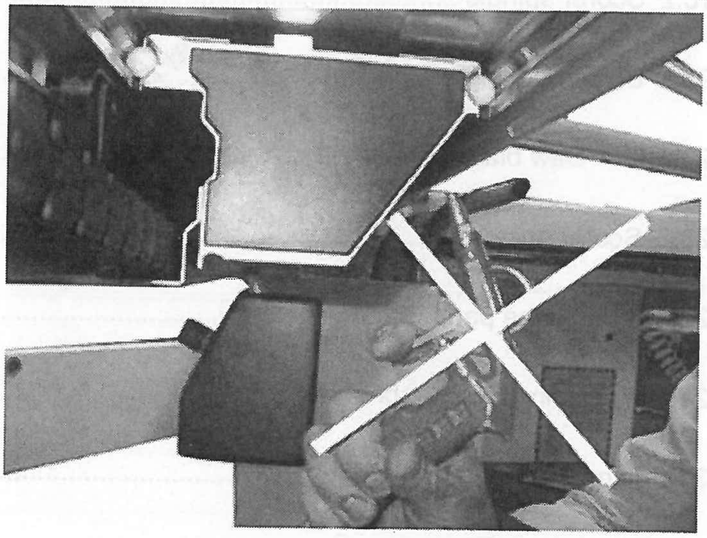


Fig_20-1_SI6000.jpg

Fig. 20.1

The general cleaning ensures the long life of the machine and is an important safety factor.

NOTE-INFORMATION:
the frequency of cleaning interventions is determined by the room in which the machine is installed and by the machined material.

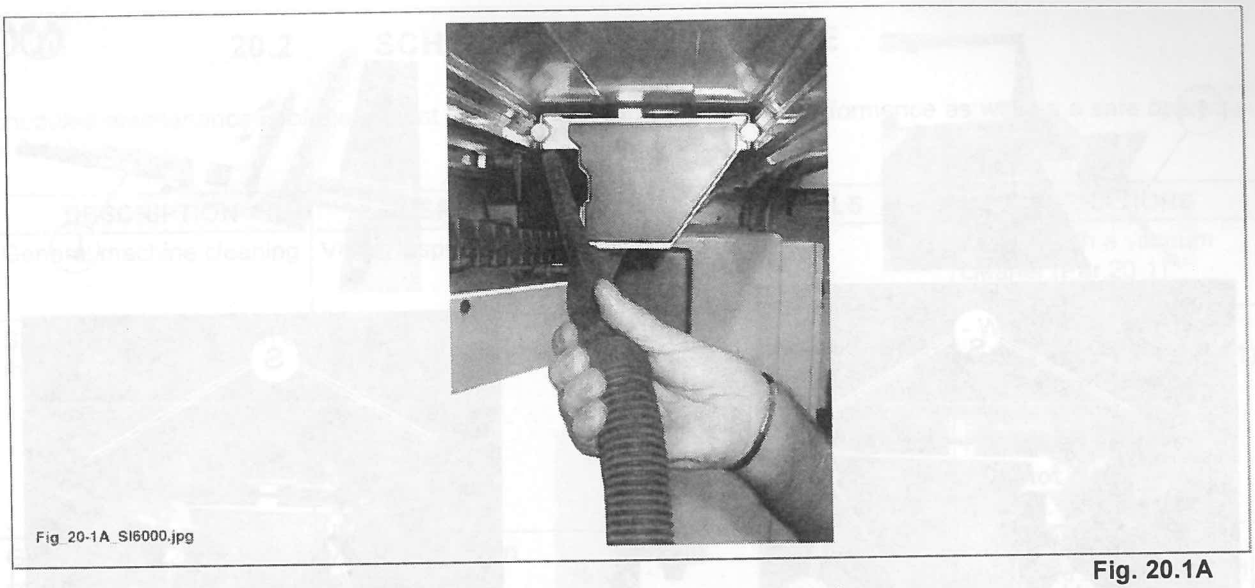


Fig. 20.1A

Rules for a correct machine cleaning

By using a power dust aspirator (fig. 20.1A) clean:

- the tables and all cavities where you see chips and dust.
- Suction hoods (T fig. 20.1B) by checking that the are no occlusions.
- With the sliding table in position 1 (totally at entry) fig. 20.1B, then in position 2 (totally at exit), its bottom guides and specially the points indicated by arrows (H fig. 20.1B) for a 15 mm depth.
- Guides (A fig. 20.1B) of squaring frame.
- Rod (L fig. 20.1B) of the fence.
- Slideways (S fig. 20.1B) of the sliding table and (B fig. 20.1B) of the rail.
- Extension (D fig. 20.1B) of pivoting arm and check that the dust scrapers correctly operate on the extension. Eventually adjust them by means of front screws, after taking off the front coverage (E fig. 20.1B).
- Groove (C fig. 20.1B), tile-shaped stop and presser with a brush or cloth drunken with not dangerous solvent.

Then by using a cloth or a brush drunken with a proper and not dangerous product, **clean all moving parts specially the ones exposed to the resin and dust.**

DANGER-WARNING:
do not oil, do not grease:
- the guides of sliding table (S fig. 20.1B) and of rail (B fig. 20.1B) .

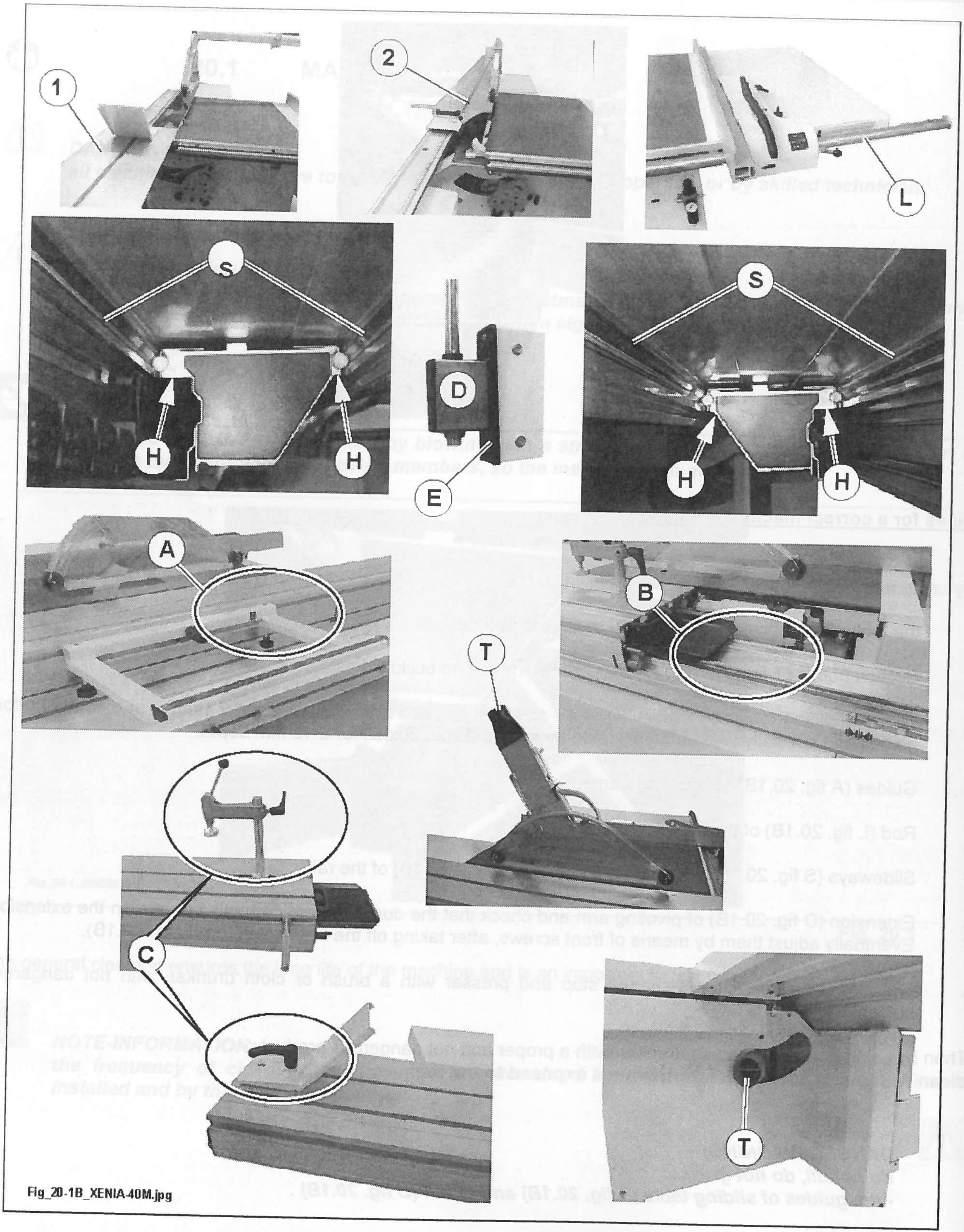

1
2
L
S
H
H
D
E
S
H
H
A
B
T
C
T
Fig_20-1B_XENIA-40M.jpg

Fig. 20.1B

20.2 SCHEDULED MAINTENANCE

(=_ov_20-2_0.0)

Scheduled maintenance is of the utmost importance to obtain the best performance as well as a safe operation of the machine.

DESCRIPTION	INSPECTION	INTERVALS	OPERATIONS
General machine cleaning	Visual inspection	Daily	- Clean with a vacuum cleaner (Par.20-1).
Slideways (S fig. 20.1B) of the sliding table	Visual inspection	Weekly	- With aspirator remove chips and dust (Par. 20.1). - With a cloth or a brush drunken with proper and not dangerous product. - **Do not oil, do not grease.**
Guides (A fig. 20.1B) of squaring frame	Visual inspection	Daily	- With aspirator remove chips and dust (Par. 20.1). - With a cloth or a brush drunken with proper and not dangerous product.
Slideways (B fig. 20.1B) of the rail	Visual inspection	Weekly	- With aspirator remove chips and dust (Par. 20.1). - With a cloth or a brush drunken with proper and not dangerous product. - **Do not oil, do not grease.**
Cleaning the suction hoods (T fig. 20.1B)	Visual inspection	Weekly	- Disconnect the hoses from the suction hoods, make sure that there are no occlusions and clean by means of an aspirator.
Extension (D fig. 20.1B) of swinging support	Visual inspection	Weekly	- With aspirator remove chips and dust (Par. 20.1).
	Visual inspection and checking the operation of dust scrapers	At least, once a year	- Eventually adjust them (Par. 20.1).
Rod (L fig. 20.1B) of the fence	Visual inspection	Daily	- With aspirator remove chips and dust (Par. 20.1). - With a cloth or a brush drunken with proper and not dangerous product.
Elements of scorer unit	Visual inspection	Every 2 weeks	- With aspirator remove chips and dust (Par. 20.1); then lubricate with grease (Par. 20.3).
Worms (A fig. 20.3) and toothed sector (B fig. 20.3) for height adjusting and tilting	Visual inspection	Weekly	- Lubricate with grease (Par. 20.3).
Right and left guides (D fig. 20.3) for the saw blade tilting.	Visual inspection	Weekly	- Lubricate with grease (Par. 20.3).

DESCRIPTION	INSPECTION	INTERVALS	OPERATIONS
Pivots (E fig. 20.3) for height adjusting of the saw blade	Visual inspection	Weekly	- Lubricate with grease (Par. 20.3).
Sprockets (F fig. 20.3) for saw unit height adjusting	Visual inspection	Weekly	- Lubricate with grease (Par. 20.3).
Pivot for hanging guard arm rotation	Visual inspection	Weekly	- Lubricate with grease (Par. 20.3).
Safety and emergency devices (Chap. 2)	Visual check and operation test	Every 2 weeks	- Carry out some stopping tests (Par. 20.7).

20.3 LUBRICATION

(=_ov_20-3_0.0)

The accurate lubrication ensures the long life as well as the best performance of the machine.

Weekly lubricate with grease:

Manufacturer	Lubricant name
AGIP	GR MU EP1
ARAL	ARALUB HL1
BP	GREASE LTX1
SHELL	SUPER GREASE EP1
MOBIL	MOBILPLEX 46
KLÜBER	CENTOPLEX 1
ESSO	BEACON EP0

1) worms (A fig. 20.3) and toothed sector (B fig. 20.3) for height adjusting and tilting of the saw blade.
2) Right and left guides (D fig. 20.3), for the saw blade tilting.
3) Pivots (E fig. 20.3) for height adjusting of the saw blade.
4) The elements of scorer unit (C fig. 20.3).
5) Sprockets (F fig. 20.3) for saw unit height adjusting.

DANGER-WARNING:
do not oil, do not grease:
- the guides of sliding table (S fig. 20.1B) and of rail (B fig. 20.1B) .

NOTE-INFORMATION:
- as all bearings are sealed and lubrificated-for life, they do not require any maintenance;
- when you have to replace these bearings directly apply to** SCM **spare parts department;
- bearings of other makes, with corresponding names, are NOT suitable.

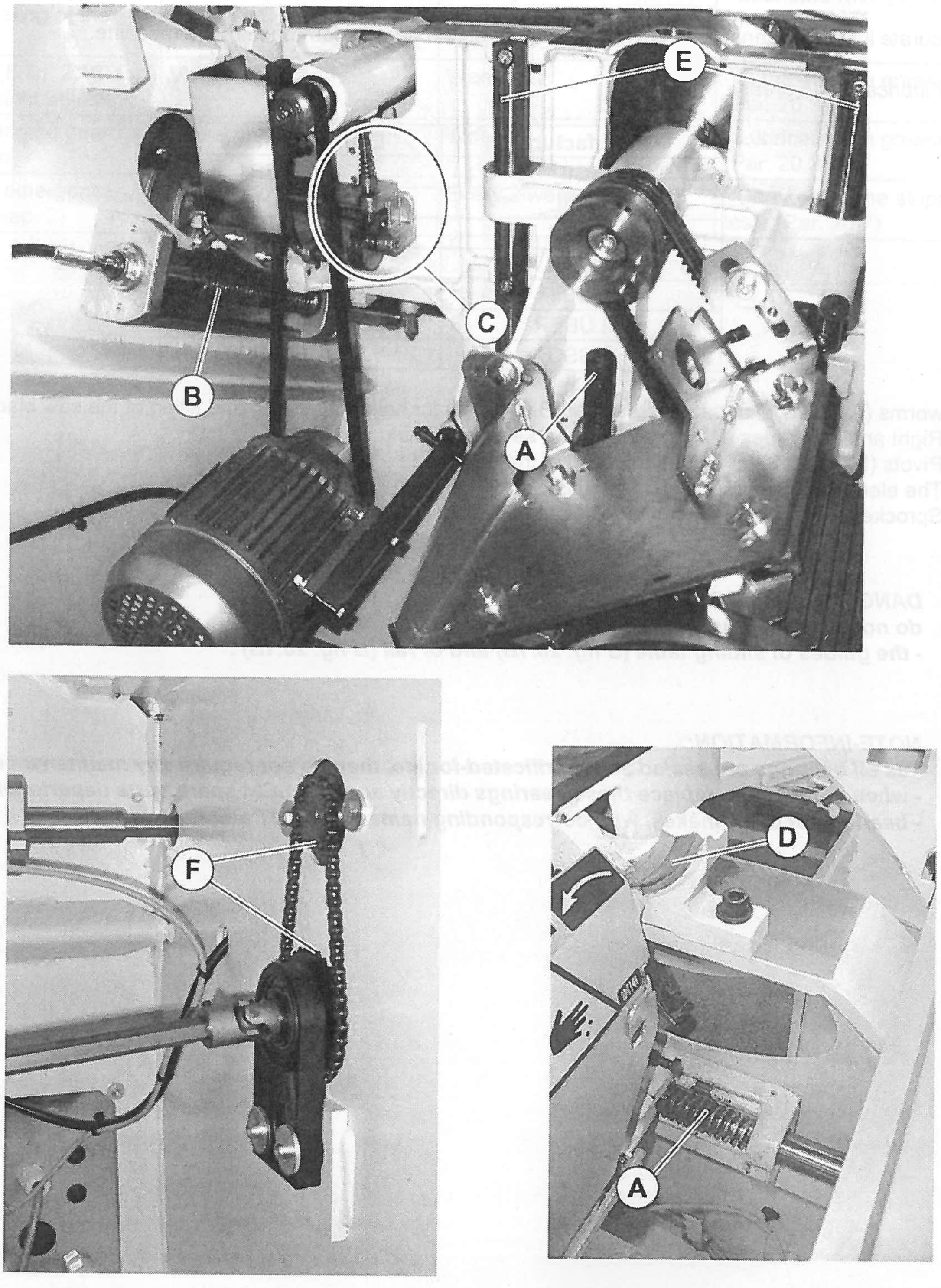


Fig_20-3_SI300S_NOVA.jpg

Fig. 20.3

20.7 CHECK OF SAFETY DEVICES

(=_ev_20-7_0.0)

The machine is equipped with safety devices described in Chapter 2 which ensure tha safe machine operation.

Every 2 weeks check the controls for emergency stops with a test.
With the machine under normal operating conditions press the emergency buttons arranged on the machine one at a time; the motor shall stop.

Every 2 weeks check that micro switches on the bottom saw blade guard:
with open guard, the saw motor shall not start.

NOTE-INFORMATION:

- the belt slackening may cause an increase of the braking time, therefore make sure that the belts are stretched and in good conditions (see par. 20.23 or 20.24).

Periodically check that the guards are efficient and that the plates in particular the ones with yellow ground are in good state.

DANGER-WARNING:

the responsible technician is to be informed about eventual troubles during the test; in that case he shall shut off the machine and apply to Technical Service of SCM ***dealer.***

20.8 AUTO-BRAKE MOTOR

(=_ev_20-8_0.0)

At least every 2 months or 500 stops, check and adjust the electromechanic braking device.
Before carrying out any intervention on the motor, shut off the power by turning the padlockable main switch to 0 - OFF.

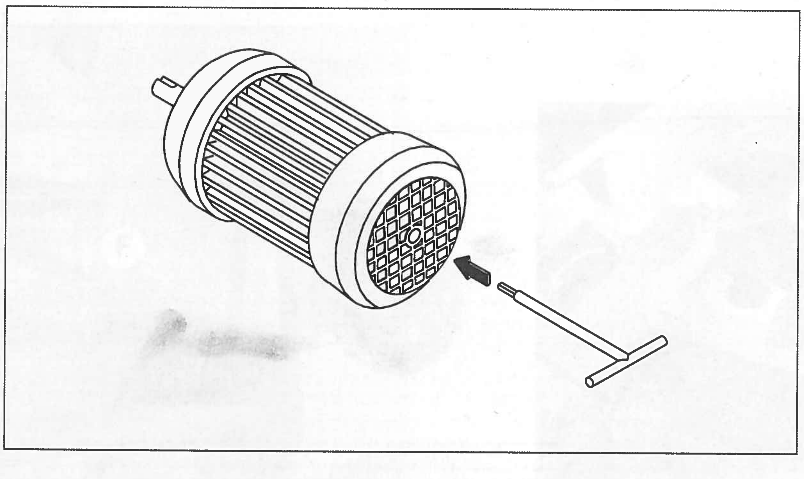
Electromagnet brake clearance

Distance between electromagnet and mobile core is called “air gap” and is adjusted during device construction.
Adjustment is required only in case of replacement of mobile core having glued to its surface a brake disk of friction material being subject to wear .
Wear limit of friction disk is 3 mm.
Replacement is to be carried out only by technicians of SCM dealer.

Adjustment of braking unit

Braking efficacy reduction can be noticed by the increase of the time required to fully stop the cutterblock/spindle (max. time 10 seconds) in case of tool of max. size and at the maximal permitted speed.
To reset the best braking torque proceed as follows:

- insert an Allen wrench into the hole on cover for the fan in order ot reach the adjusting screw;
- progressively screw down screw in order to join the mobile elements and to eliminate distance (brake clearance);
- unscrew screw by min.1/4 turn (max.1/3 turn) (corresponding to about 0.4 mm air gap);
- start and stop the motor a few times to check the correct running.



20.18 REPLACING THE BELTS

(=_ev_20-18_0.0)

20.18.1.ASAW BLADE SPINDLE

(=_ev_20.18.1.a_0.0)

- Set the saw unit to a position corresponding to the half of its stroke.
- Stop the machine see Chapter 5; turn the main switch to 0, then lock it and indicate this with a sign.
- Take off the rear door.
- Loosen screw (A fig. 20.18-1-A).
- Raise the motor and support it (B fig. 20.18-1-A, weight approx. 30 kg): the belts are slack and may be replaced.
- Set the new belt into the relative race.
- Lower the motor.
- Stretch the belts: see paragraph. 20.23.
- Tighten screw (A fig. 20.18-1-A).
- Fit the rear door again.

NOTE-INFORMATION:
if only one belt is wear, you have to replace all belts.

FORBIDDEN:
- never couple belts of different make;
- never use a new belt and an old one, because in that case the new belt tramsmits the entire power by itself and so it is damaged in short time.

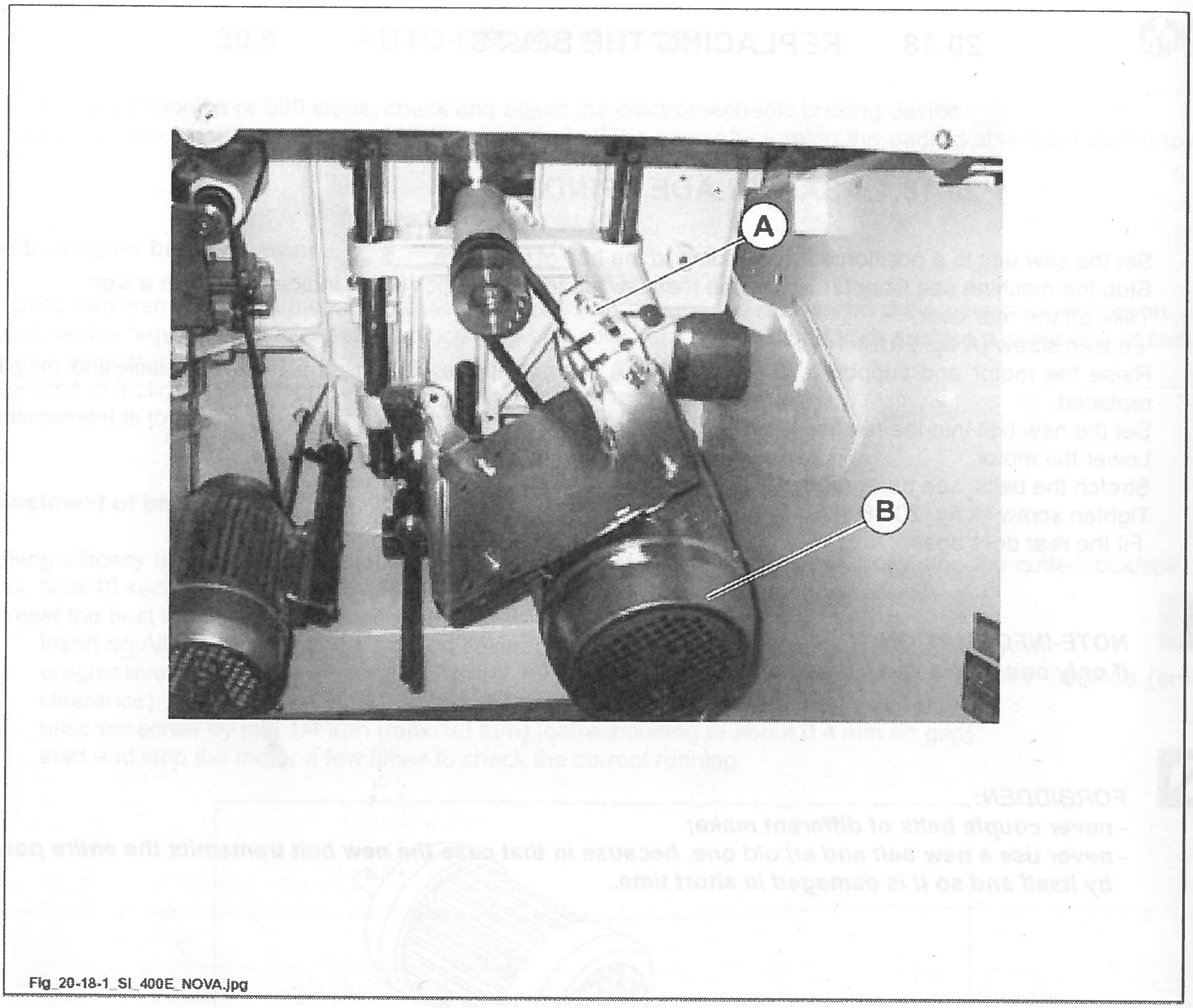

A
B
Fig_20-18-1_SI_400E_NOVA.jpg

Fig. 20.18-1-A

20.18.2 SCORER SPINDLE

(=_ev_20-18-2_0.0)

- Stop the machine see Chapter 5; turn the main switch to 0, then lock it and indicate this with a sign.
- Take off the rear door.
- Lift motor (A fig. 20.18-2, weight approx. 10 kg) and support it (e.g. with a wood traverse): in this way it is possible to replace the belt.
- Fit the new belt.
- Lower the motor.
- Manually make the belt cover 2 or 3 complete turns so that it may get the right settling.
- Fit the rear door again.

NOTE-INFORMATION:
the scorer belt always remains stretched by the motor weight.

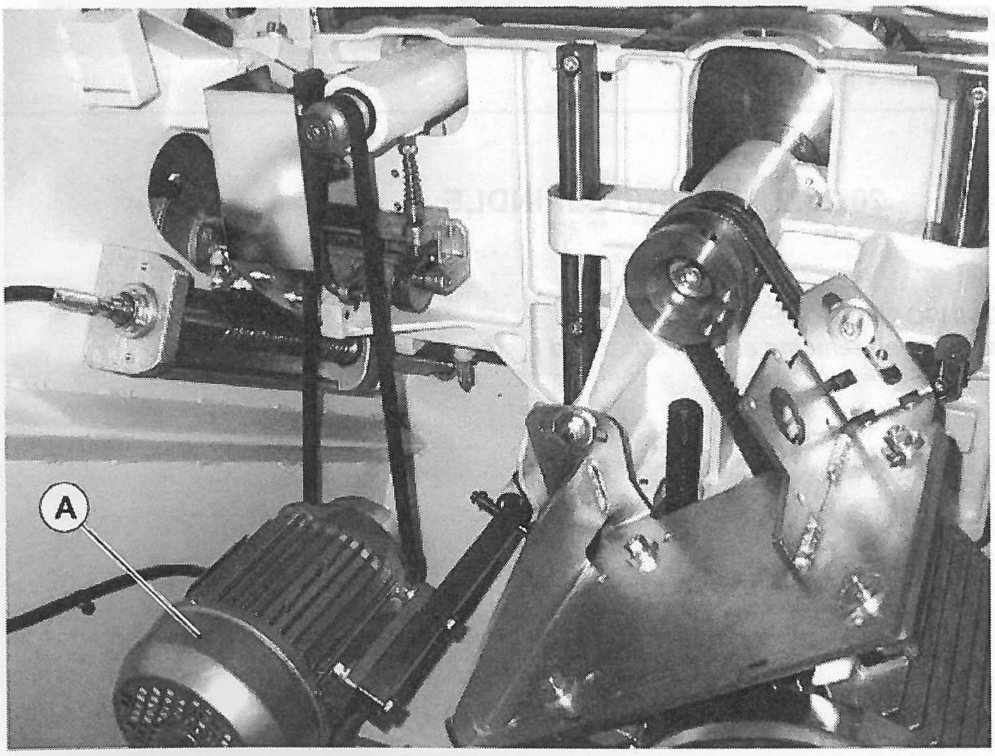


Fig_20-18-2_SI400EP_NOVA.jpg

Fig. 20.18-2

20.23 BELT STRETCHING

(=_ev_20-23_0.0)

DANGER-WARNING:
after the first working period or after many working hours the belts get slack: this may increase the time required to stop the saw blade.

The belt tension is right if, by applying a 3 kg force in the middle of the belt, you get an elastic flexion of approx. 2 mm.

For stretching the belts proceed as follows.

20.23.1.ASAW BLADE SPINDLE

(=_he_20.23.1.a_0.0)

- Set the saw unit totally down.
- Stop the machine see Chapter 5; turn the main switch to 0, then lock it and indicate this with a sign.
- Take off the rear door.
- Loosen screw (A fig. 20.23.1-A).
- Strongly push the motor downwards.
- Tighten screw (A fig. 20.23.1-A).
- Fit the rear door again.

20.23.2 SCORER SPINDLE

(=_ev_20-23-2_0.0)

NOTE-INFORMATION:
the scorer belt remains always stretched by the motor weight.

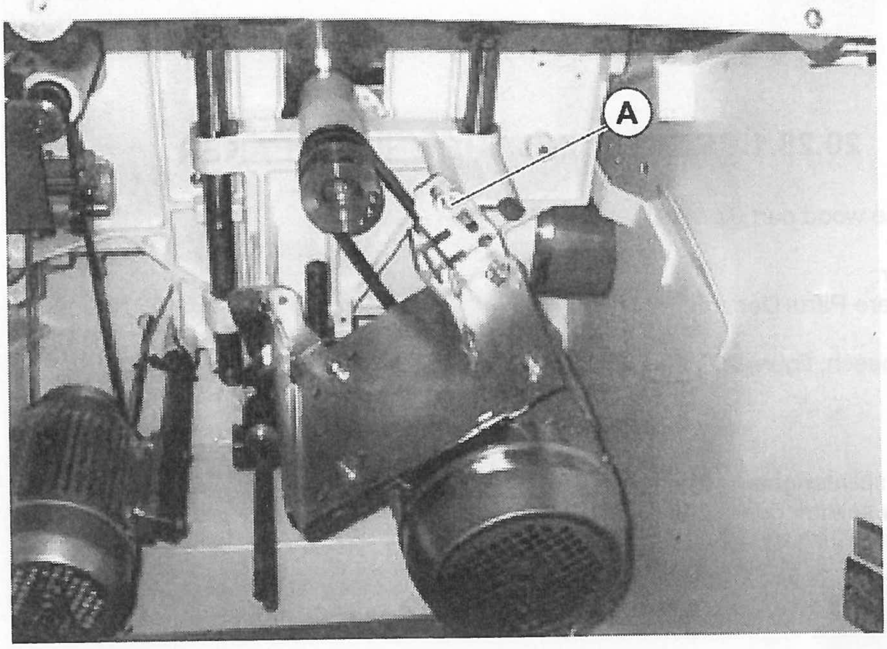


Fig_20-23-1-A_SI_400E_NOVA.jpg

Fig. 20.23-1-A

20.28 MAKING THE PARTS WHICH GET WORN

(=_-ev_20-8_0.0)

20.28.1 REPLACING THE CHIP BREAKER

(=_ev_20-28-1_0.0)

If you have to replace wood part (M fig. 20.28-1), request it:

- to SCM dealer;
- or to SCM Spare Parts Department,

or make it by using beech; figure 20.28-1 indicates the measures.

To replace the worn splinter guard, use the screws (X fig. 20.28.1).
Reassemble the new splinter guard and tighten the screws (X).

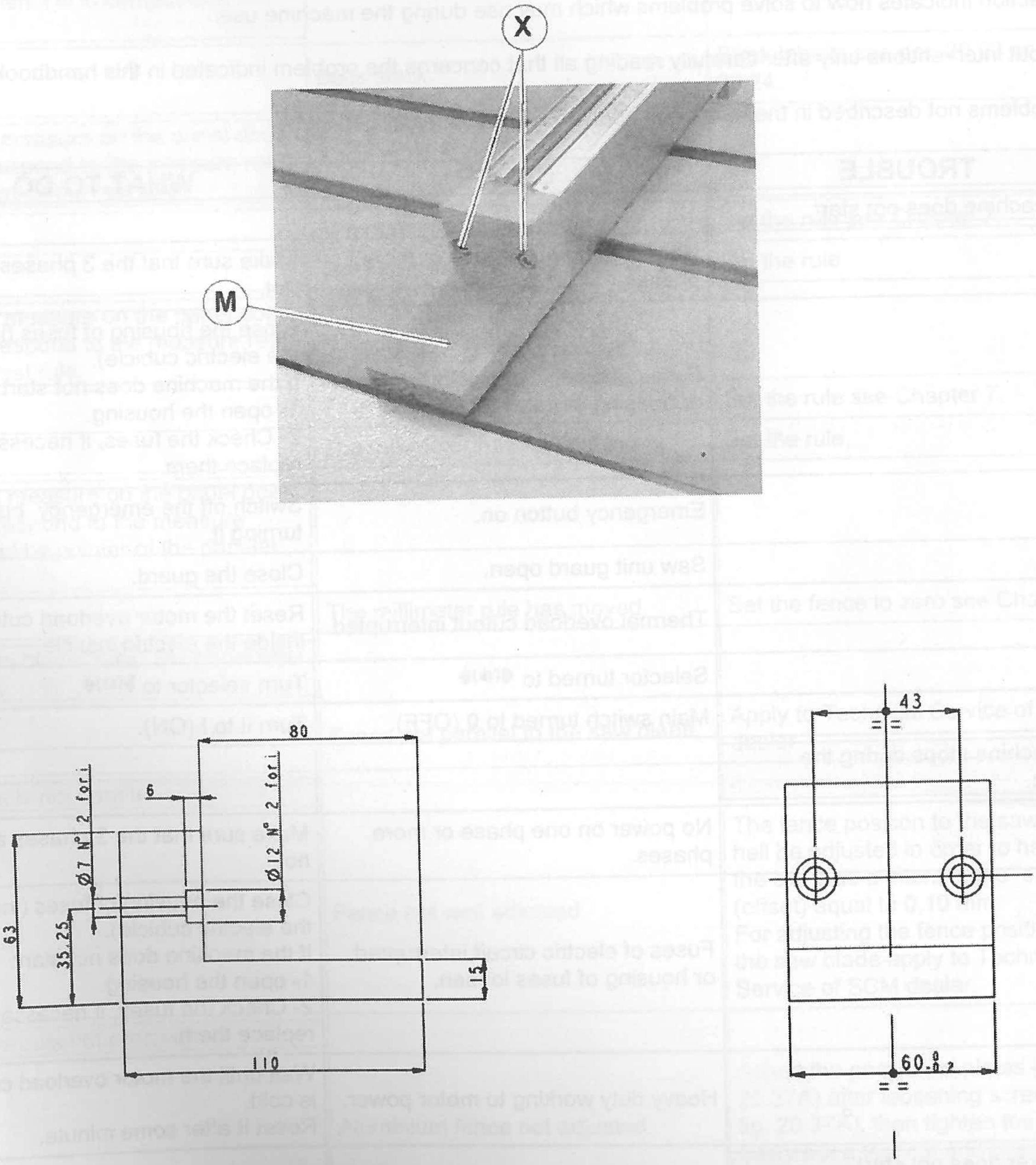

X
M
80
6
Ø7 N° 2 fori
Ø12 N° 2 fori
63
35.25
15
110
43
= =
60 0/-0.2
= =

Fig_20-28-1_SI400EP_NOVA_09-11.jpg

Fig. 20.28-1

20.37 TROUBLES - CAUSES - WHAT TO DO

(=_ov_20-37_0.0)

This section indicates how to solve problems which may rise during the machine use.

Carry out interventions only after carefully reading all that concerns the problem indicated in this handbook.

For problems not described in the handbook apply to SCM Technical Service.

TROUBLE	CAUSE	WHAT TO DO
The machine does not start.		
	No power on one phase or more phases.	Make sure that the 3 phases are hot.
	Fuses of electric circuit interrupted or housing of fuses loosen.	Close the housing of fuses (inside the electric cubicle). If the machine does not start: 1- open the housing. 2- Check the fuses, if necessary replace them.
	Emergency button on.	Switch off the emergency button by turning it.
	Saw unit guard open.	Close the guard.
	Thermal overload cutout interrupted.	Reset the motor overload cutouts inside the electric cubicle.
	Selector turned to ◀(●)▶	Turn selector to ▶(●)◀.
	Main switch turned to **0** (OFF).	Turn it to **I** (ON).
The machine stops during the working.		
	No power on one phase or more phases.	Make sure that the 3 phases are hot.
	Fuses of electric circuit interrupted or housing of fuses loosen.	Close the housing of fuses (inside the electric cubicle). If the machine does not start: 1- open the housing. 2- Check the fuses, if necessary replace them.
	Heavy duty working to motor power.	Wait until the motor overload cutout is cold. Reset it after some minute.
The scorer does not start.		
	The saw motor is not on.	Start the saw motor.
If you turn selector to ◀(●)▶, the brake is not released.		
	Fuse housing open or fuses interrupted.	Close the housing of fuses (inside the electric cubicle). If the brake is not released: 1- open the housing. 2- Check the fuses, if necessary replace them.

TROUBLE	CAUSE	WHAT TO DO
The motor rotates but the saw blade stops when it is in contact with the piece.		
	Belts slack.	Stretch belts see par. 20.23 or 20.24.
The cut measure on the panel does not correspond to the measure read on display of the rest rule.		
	The rest rule has moved.	Set the rule see Chapter 7.
	The millimeter rule has moved.	Set the rule.
The cut measure on the panel does not correspond to the measure read on the rest rule.		
	The rest rule has moved.	Set the rule see Chapter 7.
	The millimeter rule has moved.	Set the rule.
The cut measure on the panel does not correspond to the measure indicated by pointer of the parallel fence.		
	The millimeter rule has moved.	Set the fence to zero see Chapter 7.
The saw blade “rubs” the panel after the cut.		
	Fence not parallel to the saw blade.	Apply to Technical Service of SCM dealer.
The cut is not parallel.		
	Fence not well adjusted.	The fence position to the saw blade hall be adjusted in order to have on the exit side a micrometric “opening” (offset) equal to 0,10 mm. For adjusting the fence position to the saw blade apply to Technical Service of SCM dealer.
Square cuts not precise.		
	Aluminium fence not adjusted.	Adjust the position of plates (A fig. 20.37A) after loosening screws (C fig. 20.37A), then tighten the screws. Carry out a test cut and check the squareness.
The scorer blade does not remain aligned.		
	Grub screw (H fig. 20.37B) is loose.	Set knob (B fig. 20.37B) to (“0”). Tilt the saw unit to 45°, then with machine off, take off the rear door to reach the motor housing and with a wrench screw down grub screw (H fig. 20.37B) to tighten it and set then align the scorer with the saw blade with test cuts and by operating on ring nut (C fig. 20.37B) with a 30-32 mm wrench.

TROUBLE	CAUSE	WHAT TO DO
	Ring nut (C fig. 20.37B) loose.	Set knob (B fig. 20.37B) to ("0"). Tilt the saw unit to 45°, then with machine off take off the rear door to reach the motor housing and with a wrench screw down ring nut (C fig. 20.37B) in order to align the scorer with the saw blade.
The scorer does not keep the vertical position.		
	Nut (D fig. 20.37B) loose.	Set knob (E fig. 20.37B) to ("0"). With machine off remove the rear door to reach the motor housing and with 2 wrenches reset the scorer blade position by means of nut (D fig. 20.37B) and counternut (F fig. 20.37B).
The scorer lifting does not occur.		
	The push rod for scorer lifting has gone out from its seat.	Reset push rod on small piston (G fig. 20.37B) and, in the housing, on the scorer sleeve.
The display V1SC-V2SC electronic control is off.		
	Battery dry.	Replace the battery: type LR14-1,5V by unscrewing cover (A fig. 20.37B) in the positions indicated in figure according to the fitting: keep the right direction of the polarity.

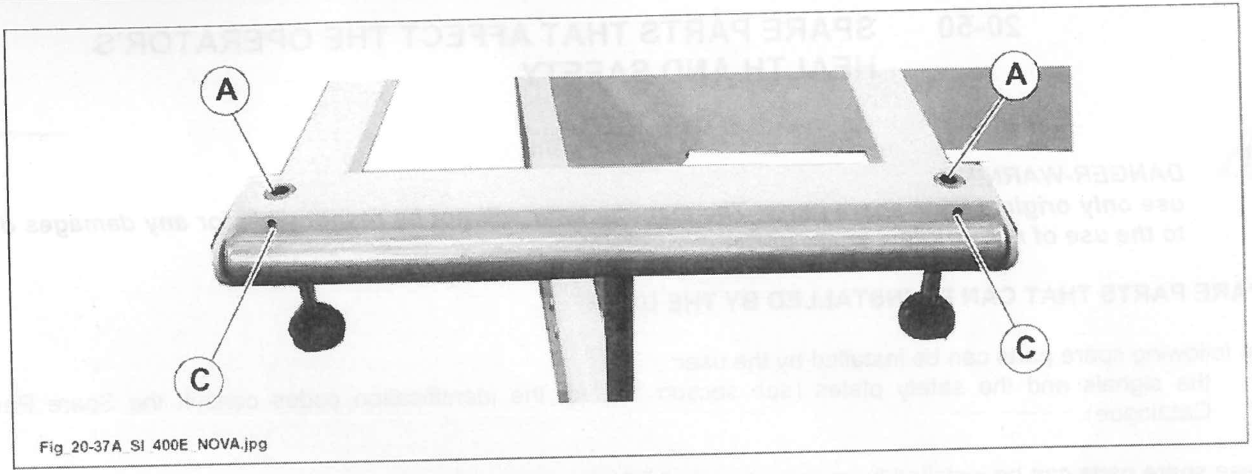

A
A
C
C
Fig 20-37A_SI 400E_NOVA.jpg

Fig. 20.37A

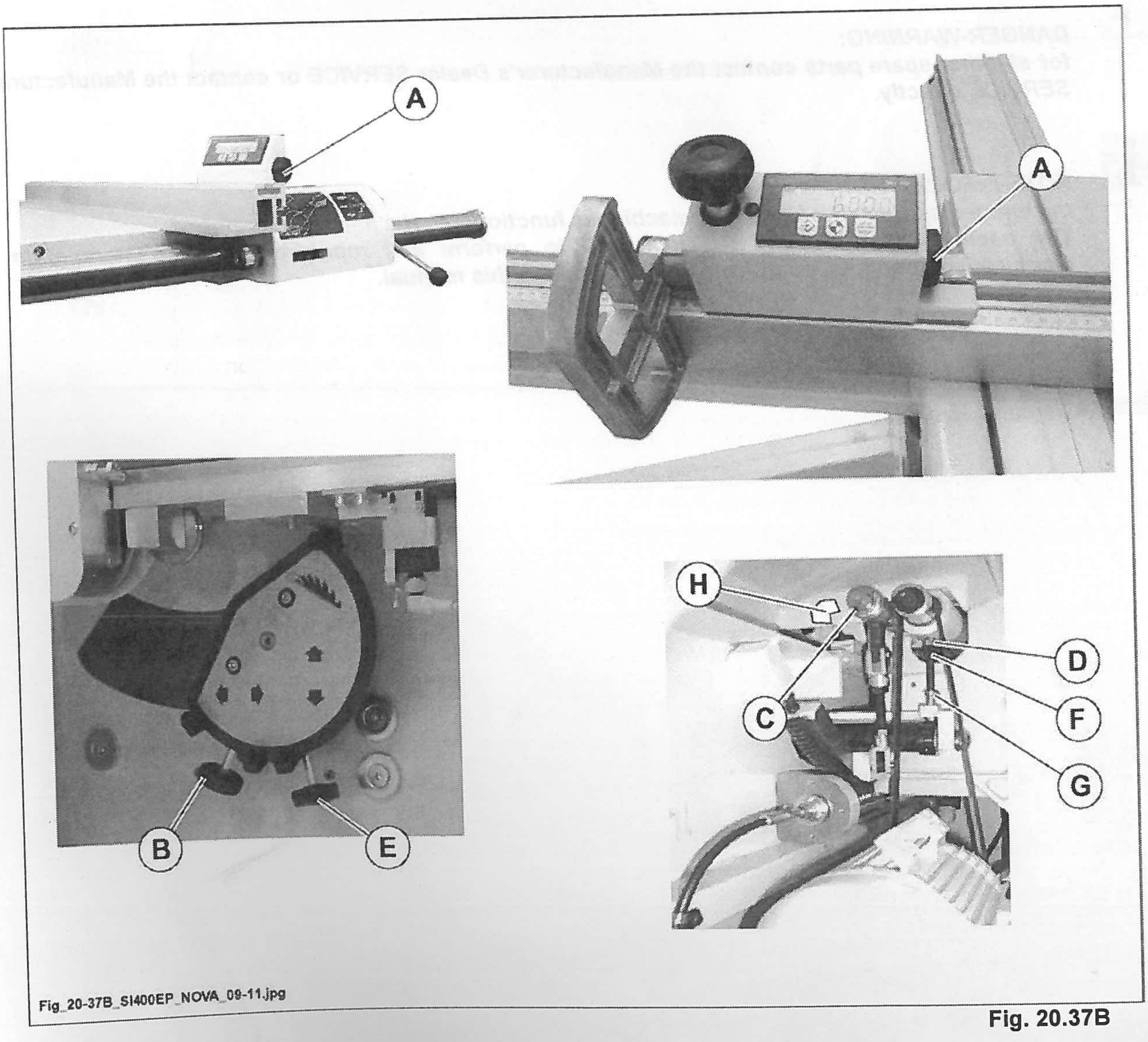

A
A
H
D
C
F
G
B
E
Fig_20-37B_SI400EP_NOVA_09-11.jpg

Fig. 20.37B

20-50 SPARE PARTS THAT AFFECT THE OPERATOR'S HEALTH AND SAFETY

(=ricambi-20-50)

DANGER-WARNING:
use only original** SCM **spare parts. The manufacturer will not be responsible for any damages due to the use of non-original spare parts.

SPARE PARTS THAT CAN BE INSTALLED BY THE USER

The following spare parts can be installed by the user:

- the signals and the safety plates (see section 1.6, for the identification codes consult the Spare Parts Catalogue).

These spare parts can be installed by expert personnel instructed by the user.

DANGER-WARNING:
for all other spare parts contact the Manufacturer's Dealer SERVICE or contact the Manufacturer's SERVICE directly.

NOTE-INFORMATION:
the entire electrical system of the machine is functional to the machine's safety.
The user is therefore NOT AUTHORISED to perform any repair/replacement intervention of electrical components, apart from any indicated in this manual.